Country of Origin Labeling: Implications for the Manitoba Hog Industry

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EXECUTIVE SUMMARY

This project was undertaken at the request of the Manitoba Pork Council in order to assess the impact of the Country Of Origin Labeling (COL) provisions of the US Farm Bill. The Council needs to know the consequences (economic and otherwise) of COL upon Manitoba hog farmers.

The Farm Security and Rural Investment Act of 2002 (the Farm Bill) contains a provision that requires the United States Department of Agriculture (USDA) to issue country of origin labeling guidelines for voluntary use by retailers who wish to notify their customers of the country of origin of beef (including veal), lamb, pork, fish, perishable agricultural commodities, and peanuts. The Farm Bill also requires that a mandatory country of origin labeling program be in place by September 30, 2004. Development of this mandatory program will begin in April 2003 and will likely be based on these voluntary program guidelines from the current interim period as well as related input the USDA receives.

The covered commodities include: muscle cuts of beef (including veal), lamb, and pork; ground beef, ground lamb, and ground pork; farm-raised fish and shellfish; wild fish and shellfish; perishable agricultural commodities (fresh and frozen fruits and vegetables); and peanuts. The law *excludes* food items from country of origin labeling when a covered commodity is an "ingredient in a processed food item." The law does not apply to covered products sold at foodservice.

In the case of beef, lamb, and pork products, the law states that a retailer may use a "United States Country of Origin" label only if the product is from an animal that was exclusively born, raised, and slaughtered in the United States. The country of origin for covered products produced in their final form outside of the United States is the exporting country. That is, fresh muscled pork from Canada would be considered "product of Canada", regardless of where the animal was born or raised. Products that were produced in both foreign markets and in the United States would be labeled to identify what production processes occurred in a foreign market and what production processes occurred in the United States. For example, a product could bear a label that states, "born in Canada, raised and processed in the United States". Another combination might be born and raised in Canada and processed in the United States. Permutations and combinations involving three countries are also possible.

Retailers and their suppliers will have to maintain a verifiable audit trail on covered commodities to substantiate country of origin labeling claims. Records must be retained for two years. Retailers must ensure that a verifiable audit trail is maintained through contracts or other means, recognizing that suppliers throughout the production/marketing chain have a responsibility to maintain the necessary supporting records.

The following are some of the key points derived from the George Morris Centre research into this issue:

- The purpose of COL is to impede or restrict imports of the covered products or the live animal inputs. In that regard it is crucial to note that the Canadian pork industry depends on the US for 35-40% of the market for hogs.

- Very little is definitely known about the costs of COL and what it will take to comply with a mandatory program. Most industry participants in the US remain uncertain or uninformed about the true ramifications.
- Most US packers will not buy Canadian hogs if COL is mandatory because cost is seen as being too high compared to simply handling US hogs.
- US packers may try to help increase the number of sows in the US to maintain plant utilization by investing in sow operations
- US retailers believe consumers don't care, the information is of no value, and will buy from Canada **if** their cost does not increase substantially.

Therefore:

1. At best, Canadian packers will benefit because pork will trade with the US, but hogs won't. Canadian pork may be able to command a premium in the US or export market because it is labeled, and conforms to specified quality characteristics or protocols. However, in every situation in the past like this when US and Canadian hog prices were disconnected (eg countervail, strikes), hog prices fell in Canada relative to the US.
2. At worst, Canada will either lose a substantial export market or retain it only at a significant price discount.

Based on this research, we identified alternative scenarios and estimated their economic consequences. In the negative scenario (2 above), we estimate:

- Canadian hog and pork industry could lose over 450 hog farms and farm income totaling over $350 million.
- Feed mills would close
- A market for 250,000 acres of cropland would be lost.
- Including grain farms, losses could be up to $750 million in farm income could be lost along with over 3,000 farms.

Strategic Implications

At the most general level, the obvious strategic objectives in response to COL are to put a process in place that maximizes the opportunity for Canadian pork to benefit from labeling, while minimizing the risk of the negative scenario. What does this mean in a practical sense?

Maximizing Opportunities[1]

The opportunities are to increase sales of Canadian labeled, (likely branded) product on US or Asian retail shelves. The former builds on the labeling requirement. The latter, especially, builds on the fact that the US will likely have a shortage of supply if COL becomes mandatory and, therefore, will need to short some customers, most likely the export market. Both build on the assumption that Canadian pigs will not be shipped to the US, and will need to be slaughtered in Canada. Moreover, the nature of the COL regulations should make transactions costs lower for the Canadian industry than for the US. This will give Canadian product a cost advantage. Increased sales can also result from higher prices if there is a basis for product differentiation.

[1] All of these suggestions apply also to the beef industry, but are presented here only in terms of pork because it is the focus of our study.

Some or all of the following are required to maximize the opportunities:

- **Product information that can be used to successfully brand Canadian product**. If such information exists, Canada may be able to benefit from both volume and price. Is there supportable research information on food safety, carcass quality, environmental benefits, etc that can be used as a claim for pork from Canada, or from a set of Canadian farms and plants? What protocols need to be put in place to ensure that the benefits claimed are actually delivered? If there is no scientific basis for claims, is there a marketing approach that will allow successful branding.
- **Shelf space incentives**. Increasingly it is important to pay retailers incentives to secure shelf space. If Canada has the basis to brand and differentiate fresh pork, especially in the US market, then we also need to have the financial resources to secure shelf space. This suggests an industry approach that would, perhaps, include processors, with partially or fully matching dollars from a fund set up with producer, federal and provincial money. This may take the form of some of the funds the US established for market development in the most recent farm bill.
- **Finishing and nursery spaces**. If Canadian hogs can't be shipped to the US, then the equivalent number of nursery and finishing spaces need to be built in Canada. With the risk afforded by the COL, financial institutions will be reluctant to make funds available. NIMBY issues because of environmental concerns need to be overcome. Therefore, two aspects of public policy need to be instituted:
    - Provincial governments need to quickly ensure that environmental requirements rigorously protect a environment, while supporting responsible economic development
    - Most likely, loan guarantees that are specific to the hazard presented by COL should be put in place to ensure the availability of capital.
    - Alternative pricing and risk management mechanisms need to be explored to replace the links to US futures and cash markets.

Minimizing the Risk of COL

By far the best way to minimize the risk that COL will not have the devastating consequences that are outlined above is to help the US decide that COL is not good for them. This includes:

- **Providing analysis that indicates the economic cost to the US.** To date, the analysis in US has focused on the costs of compliance by their packers and farmers – ie the cost of segregation and paper work. It has not measured the economic costs of lost capacity utilization of packing plants and/or finishing operations, the costs to consumers, or, conversely, the economic and environmental costs of increasing the US sow herd enough to offset the loss in Canadian hogs. This can be done based on the same scenarios we used in the current study to estimate the impacts on Canada.
- **Ensuring that the analysis gets appropriately provided into the US political system.** This likely means coordinating efforts by Canadian producer associations, federal and provincial governments, and US trade associations to hire lobbyists who will develop a lobbying strategy and implement the flow of information into the congressional and executive branches most effectively.
- **Investigate all possible avenues to prosecute COL under either NAFTA or WTO rules**. This includes, if possible, the possibility of prosecution before it is mandatory: if not, any reparations may be unable to offset the damage. This likely needs to be done as part of the lobby effort listed above.

Concluding Comment

This is a preliminary exploration of strategic responses. There may be additional steps and some of those discussed here may require further analysis. However, they seem logical given the situation. What is clear is that this is a time when commitment is needed by the industry and government. COL is a clear threat to one of the most vibrant aspects of Canada's Agri-food sector. It needs to be dealt with quickly and with determination.

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1.0 Introduction

1.1 Purpose

This project was undertaken at the request of the Manitoba Pork Council in order to assess the impact of the Country Of Origin Labeling (COL) provisions of the US Farm Bill. The Council needs to know the consequences (economic and otherwise) of COL upon Manitoba hog farmers.

1.2 Objectives

This research project was designed to determine the impact and consequences of the implementation of COL for Manitoba farmers. The specific objectives of this project are based on the assumption that the legislation is implemented as currently written and COL becomes mandatory. These objectives are as follows:

1. Determine the likely reaction and steps that would be taken by both US packers and retailers.
2. Determine the likely reaction and steps that would be taken by US hog finishers and those that purchase and trade in Canadian weaner/feeders.
3. Determine the capabilities, likely reaction and steps that would be taken by Canadian packers.
4. Determine the capabilities, likely reaction, and steps that would be taken by Canadian farrow-to-finish producers and finishers.
5. Based on Objectives 1-4, but primarily based on Objectives 1& 2, estimate the likely short-term (one to two year) impacts on Canadian slaughter and weaner prices.
6. Based on Objectives 1-4, estimate the longer-term (3+ years) price and industry impacts on the Canadian hog and pork processing industries.
7. Determine short-term income impacts on and resulting supply/production responses of Canadian producers.
8. Determine longer-term income and resulting supply/production responses of Canadian producers and packers.
9. Determine any impact on the Canadian feed grain sector.

1.3 Methodology

The methodology for this project involved the following five steps:

1. Review and evaluation of the COL Farm Bill Guidelines.
2. Review and evaluation of related articles and research regarding COL.
3. Interviews of industry participants from all sectors in Canada and the United States.[2]

[2] George Morris Centre staff interviewed US packers, retailers, producers and industry associations in order to determine the implications and reactions to the COL. Similar research was conducted with Canadian packers and

4. Evaluation of price and production impacts using statistical and economic analysis, based on the above research.
5. Determination of possible structural and production responses by industry participants based on the estimated price and production impacts.

1.4 Outline

The following is the outline of this research project based on the objectives and purpose.

Background
- Explanation of Country of Origin Labeling
- Outline of the guidelines as published by the USDA

Industry Reaction
- Industry views of the guidelines
- Industry steps to implement the regulations when they become mandatory

Costs of Implementing COL
- Identification of COL costs on the industry
- Itemization of cost magnitude

US Hog and Pork Industry Profile
- US trade status in hogs and pork
- Canadian imports of hogs and pork
- Canadian import as a share of US industry
- US slaughter capacity
- US price-supply situation

Canadian Industry Overview
- Slaughter and capacity
- Trade situation

Impact Scenarios
- Negative Scenarios (short and long term)
- Positive Scenarios

Conclusions and Recommendations

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hog producers in order to determine their views on the likely impact. An outline of the questions asked to each of the industry participants is included with Appendix 1.

2.0 Background

The 2002 US Farm Bill legislates the spending and regulations for US agricultural commodities for a six-year period. The legislation was signed into law in the spring of 2002. One of the provisions included in this Farm Bill under the heading Title X – Miscellaneous is "Country of Origin Labeling: For meat, fruits & vegetables, fish and peanuts." This provision required the Secretary of Agriculture to provide guidelines for voluntary labeling by September 30, 2002. The program is slated to become mandatory on September 30, 2004.

The purpose of this section of the report is to describe what Country of Origin Labeling entails, as outlined by the USDA and the guidelines published to date.

2.1 Guidelines

The Farm Security and Rural Investment Act of 2002 (the Farm Bill) contains a provision that requires the United States Department of Agriculture (USDA) to issue country of origin labeling guidelines for voluntary use by retailers who wish to notify their customers of the country of origin of beef (including veal), lamb, pork, fish, perishable agricultural commodities, and peanuts. The guidelines include definitions and an outline of what the USDA believes represents the framework of a consumer notification, product marking, and record-keeping program that would be required to carry out this program. It is important to note that industry is not required to participate in this voluntary labeling program that will be in effect until a mandatory program is implemented.

The Farm Bill also requires that a mandatory country of origin labeling program be in place by September 30, 2004. Development of this mandatory program will begin in April 2003 and will likely be based on these voluntary program guidelines from the current interim period as well as related input the USDA receives.

On October 11, 2002, the Guidelines for the Interim Voluntary Country of Origin Labeling were published in the Federal Register. The following are the key excerpts from the guidelines:

2.1.1 Covered Products

- The covered commodities include: muscle cuts of beef (including veal), lamb, and pork; ground beef, ground lamb, and ground pork; farm-raised fish and shellfish; wild fish and shellfish; perishable agricultural commodities (fresh and frozen fruits and vegetables); and peanuts.
- The law *excludes* food items from country of origin labeling when a covered commodity is an "ingredient in a processed food item."
- Where there are added ingredients, so long as the character of the whole muscle beef, lamb or pork is retained, the resulting products are covered. This includes such products as needle-tenderized steaks; seasoned, vacuum packaged pork loins; and water enhanced case ready steaks, chops and roasts. These items would be covered because the combination of the ingredients and muscle cuts of beef, lamb, or pork does not result in a product with an identity that is different from that of the definition of a covered commodity.
- In situations where the whole muscle beef, lamb, and pork is an ingredient in a processed food item, and the identity of the processed food item is significantly different from that of

the covered commodity, the processed food item is excluded from country of origin labeling. Sausage is a processed product under these guidelines.

2.1.2 Country of Origin

- In the case of beef, lamb, and pork products, the law states that a retailer may use a "United States Country of Origin" label only if the product is from an animal that was exclusively born, raised, and slaughtered in the United States.[3]
- The country of origin for covered products produced in their final form outside of the United States shall be the exporting country. That is, fresh muscled pork from Canada would be considered "product of Canada", regardless of where the animal was born or raised.
- Products that were produced in both foreign markets and in the United States would be labeled to identify what production processes occurred in a foreign market and what production processes occurred in the United States. For example, a product could bear a label that states, "born in Canada, raised and processed[4] in the United States". Another combination might be born and raised in Canada and processed in the United States. Permutations and combinations involving three countries are also possible if that information can be verified.
- The law requires the USDA to formulate guidelines for country of origin labeling for ground beef (and to a lesser extent ground lamb and pork), mixed fruit and vegetables, and blended seafood products that are covered commodities. Each of the raw material sources for mixed or blended items would have a country of origin as defined by these guidelines and must be identified. The applicable country of origin for each raw material source (as defined in the guidelines) must be reflected in the labeling of the mixed or blended retail item by order of prominence by weight. This being the case, ground beef would be labeled with the applicable country of origin information for each raw material source in descending order of prominence by weight.

2.1.3 Method of Notification and Verification

- To convey country of origin information to consumers, the law states that retailers may use a label, stamp, mark, placard, or other clear and visible sign on the covered commodity, or on the package, display, holding unit, or bin containing the commodity at the final point of consumption. Food-service establishments such as restaurants, bars, food stands, and similar facilities, as noted earlier, are exempt.
- The law contains several provisions for the verification of country of origin claims. The law states that, "The Secretary may require that any person that distributes a covered commodity for retail sale maintain a verifiable record keeping audit trail to verify compliance." To have a meaningful program, retailers and their down-line suppliers will have to maintain a verifiable audit trail on covered commodities to substantiate country of origin labeling claims. The guidelines require records be retained for two years.
- Any person engaged in the business of supplying a covered commodity to a retailer must make available information to the retailer indicating the country of origin of the covered commodity. These people include producers, growers, handlers, packers, processors, and importers. Each of these people must maintain auditable records documenting the origin of covered commodities. Self-certification by such persons is not sufficient.

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[3] In the case of farm-raised fish and shellfish, the product must be fish or shellfish hatched, raised, harvested, and processed in the United States. For wild fish and shellfish, it must either be harvested in the waters of the United States or by a U.S. flagged vessel and processed in the United States or aboard a U.S. flagged vessel. In addition, the label must distinguish between farm-raised and wild fish products.

[4] The word, processed is going to be used as opposed to "slaughtered."

- Retailers must ensure that a verifiable audit trail is maintained through contracts or other means, recognizing that suppliers throughout the production/marketing chain have a responsibility to maintain the necessary supporting records.
- To ensure accurate labeling and provide an auditable document trail, retailers must have records at the place of final sale that verify the country of origin of all covered commodities sold at that facility. Records of any person who prepares, stores, handles, or distributes a covered commodity and/or comprehensive records maintained by the retailer may be located at points of distribution and sale, warehouses, or at central offices.
- Records for domestically produced and/or processed products must clearly identify the location of the growers and production facilities.
- When similar covered commodities from more than one country or different production regimes are present, a verifiable segregation plan must be in place. The law does not require that the final product from different countries needs to be segregated - the segregation is the labeling of the product.
- For imported commodities, records must provide clear product tracking from the port of entry into the United States.

2.1.4 Mandatory Program

- The voluntary guidelines outlined above provide a beginning perspective on what the final mandatory program will look like beginning September 2004. From October 2002 through the spring of 2003, the USDA will be seeking input on the guidelines as it formulates mandatory regulations.
- According to the actual legislation, the mandatory program will contain an enforcement provision which states "… [if] the Secretary determines that the retailer has willfully violated [the law], after providing notice and an opportunity for a hearing before the Secretary with respect to the violation, the Secretary may fine the retailer in an amount of not more than $10,000 for each violation." AMS staff also note that provisions will exist for fines against suppliers as well.

2.1.5 Interpretation/Summary Pertaining to Pork

- The covered products are all muscled pork cuts sold at retail in the United States. Marinated muscle cuts and cuts with similar levels of added value are also included. Sausage is not covered.
- Chicken, one of the two main competitors to pork, is exempt.
- Muscled and similar cuts of pork shipped from Canadian packers are now identified at point of entry as Product of Canada. This "Product of Canada" information will now be carried through to the retail meat case. Pork cuts that are Product of Canada will not need additional information or audit.
- Every hog producer in the U.S. will be required to provide proof of where each animal is born. Every buyer of hogs from the ranch/farm to the packing plant will have to keep a record of that birth. In order to administer the program a mandatory trace-back system is necessary.
- Every hog slaughtered in the US will need its own "passport" stating its birthplace and its movements from birth to death. Packers and distributors will have to find a way to track every individual cut of meat, which means there will have to be tracking systems from the farm through to packing plants.
- Verification and audit will be required for covered commodities regardless of country of origin. Therefore even if a retailer or packer decide to only produce and sell US product, the

costs of audit and verification will still exist. US hog finishers, nurseries, and farrowing operations will also bear this cost.

- Audit will be much simpler for retailers for finished pork products shipped directly from Canada. Customs papers will suffice to prove an item is a product of Canada.
- A key issue is going to be whether the logistical challenges of sorting, inventory and segregation will be greater for those packers that choose to produce or sell product that is not completely US country of origin.
- US packers and producers are going to carry the cost and logistical burden of audit and verification for pork products slaughtered in the United States. That is because retailers will push much of the responsibility back down the chain. Canadian packers and producers will not carry a similar burden for pork product shipped from Canada to the United States.
- US retailers are the front-line of the COL process and as such are responsible for ensuring product is verified. The retailer will determine the method and requirements that satisfy the legal requirements of the legislation.

3.0 Industry Perspective and Intentions

The purpose of this section is to provide insight into the industry's reaction, perception and intentions associated with COL. This section not only seeks to understand the initial reaction to COL, but to literally determine how the industry will react or implement the proposed guidelines once the system becomes mandatory. Most of the discussion focuses on US producers, packers and retailers but Canadian producers' insights are also offered.

Based on this understanding of how US industry participants will react to and implement the regulations in 2004, it is expected the Canadian industry can gain an understanding of what COL will mean to their businesses. That is, the reaction and implementation plans of the US industry participants will determine to a large extent how COL will impact the Canadian industry. For example, if the US industry determines that it will be "business as usual" after COL becomes mandatory, then the impact in Canada will be muted. If industry participants decide that they will not deal with Canadian pork or hogs, then the impact on Canada will be significant.

3.1 Initial Industry-Wide Reaction

Initial US industry reaction to the Country of Origin Labeling guidelines and relevant Farm Bill legislation has been generally negative. Those who favor the legislation or concept have two main concerns:

- The guidelines do not go far enough to fulfill the purpose of the legislation (concern regarding the potential to circumvent the proposed legislation).
- The guidelines impose a greater burden on domestic producers than on trading partners.

Proponents such as R-CALF and the United Stockgrowers of America have expressed the above noted views.

The opponents of the legislation are most notably the Food Marketing Institute, (FMI, the US organization that represents the interests of grocers) and the American Meat Institute, (AMI, the US organization that represents the interests of meat processors). The fundamental concerns voiced by both of these groups can be summarized in the following two points:

- The legislation will impose significant cost on industry participants.
- Consumers are not concerned or interested in country of origin and if they were, the industry would already be providing this information on a voluntary basis.

It is also of particular interest that the National Pork Producers Council has expressed serious concerns regarding COL. These concerns relate to the potential for COL to be an impediment to trade. NPPC is concerned that this sort of "unnecessary, burdensome and potentially misleading" legislation will proliferate around the world. They note that such provisions are really designed to make imported products more costly. NPPC understands that, as a growing exporter, the United States cannot afford to impose these restrictions on others without the risk of similar or more direct action being taken against the United States. NPPC is also concerned about the cost burden.

In summary, the proponents of the COL regulations want the legislation to be more restrictive on imports with lower costs to domestic producers. The opponents see increased costs but no value to the consumer.

3.2 US Supermarket Reaction and Intentions

In order to determine how US retailers will react to and implement the regulations once they become mandatory, the George Morris Centre interviewed retail meat officials[5]. These officials all wished to remain anonymous. Officials interviewed represented firms that have cumulative sales of $114 billion dollars or nearly 45% of the total sales of the top 25 supermarkets in the United States. Based on the discussions with these retailers as well as secondary research conducted with third parties in the United States, it is believed that the views captured here are representative of the industry reaction. The following are the key points based on all interviews:

- There are varying degrees of awareness of the guidelines and what they might mean to their business. Some retail grocers are very well informed of the details of COL while others have little knowledge of the concept or ramifications.
- Retailers have not conducted detailed analysis as to the ramifications of mandatory COL. They are taking a "wait and see" approach.
- There is no possibility that retailers will implement the voluntary program.
- All retailers are opposed to COL for two reasons:
    - It imposes unnecessary costs on the system
    - It does not add value to their customers (ie. their customers are not demanding country of origin information).
- The first priority for all retailers is to attempt to change or eliminate the COL provisions before they become mandatory.
- Almost all retailers have purchased and merchandised Canadian pork products as well as pork and other covered products from around the world. They understand the importance of trade to their business and the importance of having a variety of suppliers.
- Canadian pork products are a part of each retailer's merchandising offerings based on quality and value considerations.
- Those retailers that have an understanding of the provisions and the implications do not see them as a barrier to purchasing Canadian pork. The imposition of a label that says product of Canada is not seen as a merchandising or procurement barrier any more than "New Zealand Lamb," for example.
- Retailers are concerned about the amount of information that will need to be on the package with regard to multiple or mixed countries of origin.
- Costs and responsibilities associated with COL will be pushed back down the supply chain, as much as possible, to packers and processors.

3.2.1 Key Retailer Learning

The most important outcome of interviews with these retailers is the fact that they have decided not to conduct detailed analysis at this time. The key intangible then relates to the potential extra costs associated with having similar products from multiple countries of origin. Based on preliminary discussions with industry officials, it is likely that multiple countries of origin for products will mean increased numbers of stock keeping units (sku's). Each sku means additional

[5] Appendix A contains the specific interview questions asked of the various industry participants.

warehouse space and additional costs. This is counter to the efforts of most retailers to reduce sku's and related costs.

There are two possible outcomes regarding Canadian pork or pork from Canadian hogs:

1. Canadian pork will require a separate sku and separate inventory space. Therefore if retailers only source product of US pork (for example), the number of sku's would not increase.
2. Canadian pork will not require a separate sku and separate inventory space *or* product from different US packers will require separate sku's. Under either of these scenarios, Canadian pork would not cost more to handle than US sourced pork.

As such, while retailers state now that they intend to keep purchasing Canadian product, if future analysis on their part indicates extra costs would result, this intention is likely to change.

3.3 US Pork Packer Reaction and Intentions

In order to determine how US pork packers will react and implement the regulations once they become mandatory, the George Morris Centre interviewed packer officials. These officials occupied public relations, presidents, vice presidents and procurement positions. More than one official per firm was contacted in most instances. These officials all wished to remain anonymous. Officials interviewed represented firms that have over 63% of the US daily slaughter capacity. Based on the discussions with these packers as well as secondary research conducted with third parties in the United States, it is believed that the views captured here are representative of the industry reaction. The following are the key points based on all interviews:

- Pork packers have a higher degree of awareness of the COL guidelines than retailers.
- There is not universal understanding or complete knowledge of the guidelines (some packers are better informed than others).
- Some packers have completed or at least begun an analysis of the ramifications of COL and what it will mean to their business.
- Key cost impacts arising from COL are:
    - Segregation and sorting
    - Inventory and storage
    - Record and audit
    - Plant utilization and efficiency
- There is disagreement among packing industry participants regarding whether complying with the legislation would require additional investment in equipment and technology associated with tracing cuts of meat in the cutting and boxing operations. Those that have done the most detailed analysis tend to believe that material investment will be required.
- Packers have begun to inform producer suppliers about COL and what it will mean to them.
- Those packers that have reviewed the situation in some detail are coming to different conclusions with regard to the slaughter of hogs that are not wholly of US origin. Some packers have decided that they will continue to take Canadian hogs (slaughter and or feeder/weaner), while others have decided that they will not take Canadian hogs. Large packers appear to be the most reluctant to take Canadian hogs. This is the case whether they currently take a significant number of Canadian hogs or whether the volumes are

immaterial. Smaller packers have decided that they will continue to take Canadian hogs as they typically already have segregation systems in place. Two major packers have not made a decision yet with regard to procurement of Canadian hogs.

- Some packers understand the importance of the Canadian supply of hogs. They are considering alternatives such as finding ways to place more sows in northern tier states.
- Packers understand that they will bear costs associated with this legislation regardless of whether they take Canadian hogs or not.
- Packers believe that retailers will push most of the costs associated with this legislation down to the packing level. Packers in turn will bid additional costs back to producers in the form of lower prices.

In addition to the background insights noted above, Tyson/IBP offered the following comments as the company's official views and response to COL:

1. Tyson/IBP is fully opposed to mandatory country of origin labeling of meat. We believe the regulation is unnecessary and will add non-recoverable costs to retail meat marketing efforts in the U.S. No instances of illness, misrepresented quality or consumer confusion exist to support the need for this law, and it appears to have been legislated purely for protectionist motives.

2. The rule will require packers to segregate the product from any meat animal which was not born, raised and processed in the U.S. Therefore, any animals born in Mexico or Canada that ultimately enter the U.S. for feeding and/or slaughter will require labeling depicting the product as product of another country. This mandated segregation process imposed on the packing industry will add costs to the packer and, in many cases due to physical plant restrictions, prevent the packer from even bidding on non-U.S. livestock. The end result will be more inefficiency and added expense to the packing industry.

3. Many plants rely on imported fed cattle from Canada to maintain minimum production hours during times of regional short supplies of U.S. fed cattle. This rule would again create the inefficiencies noted above and, in extreme cases, may lead to packing plant closures. If a plant closes due to an occasional lack of supply, the packer won't be competing for the local supply when it is available.

4. Canada has asserted they will not permit the use of a "product of Canada" statement on meat processed outside of Canada. This creates a problem with how this meat will be labeled.

5. Livestock slaughtered and processed in the U.S. are subjected to the same USDA inspection and voluntary grading process regardless of whether the animal was born or raised in the U.S. Furthermore, animals entering the U.S. are already scrutinized by the USDA for animal health and food safety.

6. Meat produced in other countries cannot enter the U.S. unless that country's processing facilities are inspected and approved by the USDA. In the case of Canada, for instance, the meat inspection and plant sanitation procedures used are fully approved by the U.S. and are comparable to U.S. programs.

7. In the end, this ill-founded and unnecessary law will place great financial burdens on the livestock feeding, meat processing and retailing industries. Integration of the North American livestock industries has led to efficiencies on both sides of the border, while this legislation will only impose costs with no resulting value to the livestock industry or consumers. The ultimate result will be meat products priced higher to the consumer with absolutely no benefit whatsoever. Congress should be encouraged to reconsider this legislation by all parties concerned.

3.4 US Hog Producers

US hog producers interviewed included farrow to finish and strictly finisher operations, and ranged from those who do not deal with any Canadian pigs to an operation where almost all of the pigs come from Canada as weaners. All operations interviewed market at least 50,000 hogs annually and most market significantly more than that. As with the retailer and packer interviews, anonymity was requested.

All of the US producers contacted who currently import Canadian pigs are opposed to the COL legislation. They feel that COL is unnecessary and will result in significant costs to producers, packers and retailers but will not provide consumers with any real benefits. US producers largely also have the 'wait and see' attitude that Canadian producers have with regard to whether or not COL will become mandatory. However, two operations that a finish significant number of Canadian weaners are not waiting to see what happens on the legislative front and are taking action to deal with the worst-case scenario of full implementation.

The key point from these interviews is that the decision as to whether US producers will continue to handle Canadian pigs depends on whether the packers they deal with will take Canadian-origin pigs in a mandatory COL environment. Most felt that there are two possible scenarios regarding the impact of COL on the volume of Canadian weaner pigs purchased by US finishers. If the packers accept Canadian-origin hogs and there is still money to be made in finishing Canadian weaners then the animals will continue to come across the border. However, if the packers decide not to deal with Canadian-origin hogs then the flow of Canadian weaners south to US finishers will be severely curtailed or stop almost completely Some producers have already spoken to the packer they deal with and have been told that the packer will either not take Canadian-origin hogs, or is in the process of making this decision.

There was consensus among US producers that there is currently not nearly enough sow barns or farrowing capacity in the US to meet the supply needs that would arise if Canadian weaners were no longer desired by US finishers. There is some disagreement however about whether enough facilities could be built in the near future. Some people feel that it is and will continue to be extremely difficult to build new sow barns, for the same reasons Canadian producers face in attempting to build new facilities - environmental regulations and public opposition.

US producers feel that if Canadian weaners continue to be purchased in the US under COL then the price will reflect any additional costs associated with the legislation. Costs are most likely to originate with the packer in the form of segregation costs and any price impact that is passed back from the retailer. Additional costs may include higher freight if hogs must be shipped to a specific packer that agrees to handle Canadian-origin hogs, rather than the closest packer that a finisher currently ships to. One producer estimates that this cost would be around $5 per hog,

although this is strictly a 'back of the envelope' type number. No one else wanted to put a dollar figure on the costs.

US producers indicated that there would be minimal or no segregation costs in their own operations. Canadian weaners are already segregated into specific finisher barns for herd health reasons. Additional costs would arise from paperwork and potentially higher freight costs associated with shipping to the packer, for the reason described above.

3.5 Canadian Producer Perspectives

This section provides the *perspectives and viewpoints* of Canadian hog producers. Canadian hog finishers and weaner producers were also interviewed in order to determine the information that is flowing to them from the US and to understand the actions that they are taking. Interviews were conducted with hog producers and other people directly involved in the hog production industry that are knowledgeable regarding COL. In addition to large and small producers, feed and swine genetics companies were also interviewed. The organizations and people contacted are located in Manitoba, Saskatchewan and Alberta.

Overall, there is a sense that the country of origin legislation will not be enacted as it is currently written. Some believe that it will remain voluntary (i.e. never become mandatory); others feel that the regulations will be changed to make them more flexible; another group believes there is a chance that the relevant legislation will be repealed entirely. Certainly, the general consensus seems to be that COL poses a threat to the Manitoba (and Canadian) hog industry, but it is not an imminent or guaranteed threat. This is reflected in the fact that although many (not all) of the people spoken to are considering their options and how COL might affect their own business, only one organization has accepted it as a *fait accompli* and is taking appropriate action.

3.5.1 Impact of COL on the Volume of Canadian Weaner Pig Exports

Assuming that COL does becomes mandatory in the US, the majority of people interviewed believe that weaner volume to the US would be drastically reduced, and a couple felt the flow would stop completely. The major reason for this is the belief that US packers will not want to handle Canadian pigs. Most people feel that the packers will be the primary influence as to whether and how many Canadian pigs continue to head south. A few people mentioned that some US packers have already indicated that they will not handle Canadian-origin hogs, and there are rumours that other plants will still take Canadian hogs by dedicating kill on a specific day, and or will even exclusively kill Canadian pigs.

A few people felt that although the volume would drop, it would not be a dramatic change. Reasons for this include:

- Canadian pigs are important enough to the viability of US companies (both finishers and packers) that they will find a way to accommodate Canadian animals into their operations. This might include shipping product to the foodservice market or to the further processed market, or they may find and develop a niche market that is willing to pay a premium for Canadian pork.
- It would be difficult for the US to build enough sow barns quickly enough to fill the supply gap if Canadian weaners stopped coming into the US. The major difficulties in building sow barns in the US are access to investment money, disease problems and environmental issues.

- US buyers are currently in Canada signing 3 to 5 year contracts. Some companies are ignoring COL, while others have included a 'force majeur' in the contract that would set aside the contract if COL becomes mandatory.

Another opinion was that Canadian producers (and their banks) prefer the type of contracts offered by US buyers because risk is limited through the floor/ceiling on prices. This type of contract is not offered in Canada so Canadian producers would also like to continue to ship pigs to the US.

One organization that previously sent pigs to a US packer has changed their practices because of COL and is now shipping to Maple Leaf Foods in Brandon. Another organization is planning to build finisher barns in Manitoba that would accommodate weaners currently finished in the US. Consequently, the volume of animals shipped to the US may decline regardless of whether COL is fully implemented.

3.5.2 Ability to Accommodate Increased Volumes of Weaner Pigs and Slaughter Hogs

Those interviewed were unanimous in their response that there is currently no barn space available in the prairie provinces to accommodate the supply of weaner pigs that are currently going to the US. The process of building finisher barns is likely to take three to four years, due in large part to the environmental requirements/permits that must be met or obtained. Many people also questioned whether there is enough capital available to build barns, and feel that the banks are currently reluctant to lend money to the hog production sector. One person felt that there is a better opportunity to build finisher barns in Saskatchewan (rather than Manitoba) because there is a greater land base available and environmental opposition is not as strong.

Everyone interviewed believes that Canadian packers have the physical capacity to accommodate the additional pigs that would have to be slaughtered in Canada if weaner shipments to the US either stop or decrease significantly. However, the caveat on this is that Maple Leaf and Olymel would have to move to double shifts, which would take time and would likely not be a straightforward or simple process. Maple Leaf's labour issues were mentioned several times as being their major limiting factor in moving to a double shift. Other limiting factors mentioned are the packers' ability to find a market for the extra hogs and the overall profitability of increasing their kill.

3.5.3 Impact of COL on Prices for Canadian Weaner Pigs and Hogs

Respondents feel that the impact of COL on weaner prices would be negative. However, some felt that the price drop would be 'devastating' and the animals essentially worth nothing, while others felt that the change would simply reflect the cost of segregation and traceback passed back from the packer and the finisher. No one felt they could put a dollar value on any potential price drop, or on the cost of segregation and traceback. A few people mentioned that even though they expected the price effect to be extremely negative, US buyers are currently pricing contracts for Canadian weaners and COL is not part of the pricing decision/formula. Most people anticipate that formula-based prices would continue to be the norm as long as contracts are being signed.

There was one dissenting opinion on this question. Someone who has heard that two major US packers may dedicate their kill to Canadian pigs feels that if this were to happen it would actually increase the demand for Canadian pigs in the US and push prices up.

Most of those interviewed believe that prices offered by Canadian and US packers would drop. The price offered by US packers (assuming they are accepting Canadian hogs) will depend on the costs associated with segregation and traceback, and the price they are receiving for product with a Canadian-origin label on it. Canadian prices would drop because of an oversupply in the market. An alternative theory that was mentioned is that if supply in the US drops enough (because US packers don't accept Canadian hogs), the US price would increase. Since Canadian prices are based on US prices, the end result would be higher prices from Canadian packers as well.

Most people were just as concerned about the link between Canadian and US packer prices. If Canadian hogs are not accepted by US packers, Canadian producers will therefore be forced to sell their hogs to Canadian packers, who will take advantage of this 'captive market' through lower prices. The end result will be more monopolistic pricing rather than the more open-market type of pricing that has gone on in recent years. In general, most people have serious concerns that Canadian prices will not continue to be based on US prices and their marketing opportunities will be restricted.

3.6 Summary Points from Industry Interviews

- US retailers and packers are strongly opposed to COL. Opposition is based on the imposition of costs and the lack of value delivered to consumers.
- Retailers have not yet fully examined the ramifications of COL to their business.
- Retailers want to continue to purchase Canadian product as it is in their interest to have a wider choice of suppliers. Decisions to do so or not will be dependent upon the outcome of their pending analyses.
- Packers appear to be reluctant to handle Canadian hogs under mandatory COL. Actual outcomes of this will be dependent upon whether at least one large packer determines that it will handle Canadian hogs. This may force a re-evaluation on the part of other packers.
- US packers will bear most of the costs of COL regardless of whether they handle Canadian hogs or not. The costs relate to audit and verification.
- Producers are awaiting the decisions of US packers before making decisions regarding their own operations.

A final point needs to be emphasized. Based on discussions with industry personnel, the commentary of industry associations and an analysis of the COL guidelines, it is apparent that the real purpose of COL is not to inform or protect consumers. The sole rationale for COL is the impediment or elimination of US imports of the covered products or animals used to produce the covered products.

4.0 Costs Associated With Country of Origin Labeling

One objective of this research was to determine the costs of implementing COL based on interviews with packers and retailers in the United States. Based on the above noted interviews with retailers and packers, cost estimates of implementing COL are not available. The cost estimates are not available because retailers and packers have yet to do the *full* analysis. Packers that have assessed the issue and have made decisions not to handle Canadian hogs have done so based on logistical assessments and capital outlay analysis. That is, they have made decisions based on a practical understanding of what will be required and the resulting capital costs. Detailed per pound or per head costs of actually handling Canadian hogs post-October 2004 has not been prepared by US packers or if it has, it has not been provided to the George Morris Centre.

In addition, the USDA has not done a full assessment of the potential costs. The November 21 USDA report in the Federal Register was simply a rough calculation of possible record keeping costs (see section 4.4 below). Furthermore, a USDA official states that at this point they are not even certain as to what will be required to actually verify product labels. This is a key cost issue because the greater the rigor the higher the cost, and vice versa.

In other words there is a dearth of knowledge regarding actual costs and program requirements of COL. Despite that, the fact is that an understanding of the costs associated with COL is important in order to understand the nature of the threat to Canadian hog and pork exports to the United States. Therefore this analysis has turned to secondary sources in order to gain insight into the potential magnitude of the costs of handling Canadian exports.

4.1 General Accounting Office Analysis

One source of information regarding costs is a Government Accounting Office (GAO) Report from 2000.[6] The discussion in this section of this report is based on the GAO report and augmented and substantiated with research conducted directly with US packers and retailers for this report.

The GAO says that U.S. meat producers, packers, processors, distributors, and retailers would have to change their practices to comply with a mandatory country of origin labeling law at the retail level. To ensure the integrity of country of origin information on meat packages that reach consumers, such information would need to be established and maintained from the animal in the field and from the point of importation to the grocery store. The additional efforts and associated costs for compliance for each industry sector would depend on the extent to which current practices would have to be changed.

4.1.1 Producer Costs

Under the provisions of the 2002 COL requirements, only animals born, raised, and slaughtered in the United States would be considered "domestic" and their meat a U.S. product. In contrast,

[6] United States General Accounting Office, Report to the Chairman, Subcommittee on Livestock and Horticulture, Committee on Agriculture, House of Representatives, January 2000. BEEF AND LAMB Implications of Labeling by Country of Origin

under current USDA rules, livestock that are imported to be raised and slaughtered in the United States may be considered part of the domestic herd after USDA has inspected them at the border and released. U.S. producers generally do not provide packers with information identifying the country of origin of the livestock when they are sold for slaughter. Under COL, producers who import these animals would incur compliance costs to maintain information on the country where each animal was born and raised. U.S. producers could be required to track and maintain detailed records of the movements of their livestock and have controls in place to ensure the accuracy of this information.

4.1.2 Packer/Processor Costs

Packers and processors will bear a large burden of responsibility for ensuring that the integrity of country of origin meat labeling is maintained to the ultimate purchaser. Currently, both Customs and USDA regard the country in which an animal is slaughtered as the country of origin of the meat from that animal. Thus, the meat from cattle and sheep[7] slaughtered in the United States is generally considered to be US meat. Packers and processors generally neither need nor maintain detailed country of origin information concerning the animals they buy from US or foreign producers. To comply with COL, which considers only animals born, raised, and slaughtered entirely in the United States as "domestic," meatpackers and processors would need to receive and maintain accurate, detailed records about the international movements, if any, of the animals they purchase from US producers. Furthermore, meatpackers would need to maintain accurate country of origin records on meat from both livestock imported for direct slaughter and livestock purchased from U.S. producers that had been imported and raised in the United States.

It is expected that packers might need additional animal holding pens and meat storage and chilling facilities to segregate animals and meat by country of origin. Packers might also need new labels and/or labeling equipment to indicate the country of origin of the covered meats.

It is to be noted that standard practice is that meat storage areas tend to be fully stocked. The slaughter and carcass-cutting activities, which are carried out in an assembly-line process, also fully occupy the plant's floor space. The packing industry regards storage areas as non-productive and these areas are designed to be small and fully utilized. As such, if they were required to segregate meat from imported animals, they would have to build additional refrigerated storage space and enlarge the meat-cutting area. Similarly, processors might need to separate meat from different countries before it enters their production runs for cutting, grinding, and blending.

Packers also note that production lines are designed for continuous flow. COL would likely require the entire production line to be shut down for separate batch runs. The meats might have to be placed in different chilling and storage areas and/or marked in some way to ensure that country of origin information is maintained until the meat is packaged and labeled. Segregating meats may therefore require additional equipment, such as refrigeration units, storage bins, and racks.

According to the GAO report, the AMI surveyed its member companies to develop an estimate of annual compliance costs for an earlier country of origin labeling proposal. Basing its estimate on the provisions of that earlier proposal, the AMI estimated that compliance with country of

[7] Note that pork was not addressed by this study.

origin labeling requirements would cost beef packers and processors $182 million, which would be equivalent to three-quarters of a cent per pound on all beef produced in the United States. Beef-packing plants that slaughter both domestic cattle and cattle imported for immediate slaughter reported their compliance costs would total 7 to 8 cents per pound on their plants' production. However, the estimate did not include the costs of identifying and maintaining country of origin information for meat from cattle that were imported and raised in the United States.

4.1.3 Retail Grocery Costs

Retail grocery stores perform many of the same activities as meat processors and would have the same types of compliance burdens. Retail grocery stores receive boxes of large cuts of meat, which their meat departments cut up and repackage into smaller retail cuts; the stores also grind the trimmings into hamburger meat. Segregating imported meats would be difficult given the grocer's space and labor constraints. The GAO notes that the FMI and the National Grocers Association have estimated that complying with country-of-origin labeling for meat would cost the nation's approximately 156,300 large and small retail grocery stores about $375 million. To comply, stores might have to separate their storage, cutting, and grinding operations to keep meats from different countries segregated. Also, grocery stores typically use machines that, in addition to packaging retail meat cuts, place labels with such information as weight and price, as well as handling and cooking instructions, on the packages. The addition of country of origin information on meat packages might make it necessary for grocers to modify or replace existing labeling machines.

In addition to these costs, retailer distribution centres would likely be forced to add stock keeping units. These added stock keeping units for imported meat and meat from animals not fully of US origin would require storage space, which would result in inefficiencies.

4.2 Cattle Buyers Weekly Analysis

The US trade publication Cattle Buyers Weekly published its analysis of the costs of COL in the October 14, 2002 edition. It said, "Mandatory country of origin labeling (COOL) is one of the most onerous requirements ever placed on the U.S. meat and livestock industry. It will cost the industry billions of dollars in added costs. Yet red meat's main competitor, poultry, escapes any COOL requirements. Even worse, COOL will do little or nothing to improve meat demand. That's how observers last week viewed the likely consequences of USDA's COOL guidelines."

CBW estimates the following:

- It will cost the beef industry alone at least $1.4 billion annually. It could cost as much as $1.9 billion. The cost to the pork and lamb industries could be another $1 billion or more.
- CBW's estimates are based on the cost of an individual animal ID system for every head slaughtered. CBW estimates it will cost $5 per head to track cattle from the ranch to the packing plant. It will cost another $15 per head for packers to reconfigure their slaughter and fabrication departments to maintain the identity of cattle into boxed beef. The cost of these two steps is $708M.
- CBW estimates it will cost retailers 5 cents per pound of beef sold to reconfigure their meat departments to maintain product identity, to maintain required record-keeping at individual stores and to place COOL labels on every beef item in the meat case. Based on

2001's production of 26.107 billion pounds, and assuming 52% was sold at retail, this represents another $679M. Adding the $708M earlier calculated means a total of $1.387 billion.

- The cost from ranch through the packing plant could be even higher than this. One integrated beef company that has one of the most comprehensive source-verified tracking systems in the industry says the system costs $30-50 per head. At $30, the industry-wide cost from ranch through the packing plant would be $1.06 billion. At $50, it would be $1.77 billion. Another private estimate given to CBW put the cost at $33 per head.

US cattle and hog finishers will likely have to reconfigure their pen space to segregate U.S. born and raised cattle/hogs from any other cattle or hogs and/or they will have to ensure that every animal on feed has an ID or passport.

Packers will have to do the same thing. A particular challenge for them is in the fabrication department. There is no system in place in major U.S. beef plants that enables beef to keep its identity beyond the carcass. In a few smaller plants, packers can identify the cattle that cuts come from, but the issue is complicated even with these facilities when cuts are bagged together.

The requirements for ground beef labeling are even more onerous. The guidelines require that ground products bear a label indicating the country of origin of every animal that makes up the product. In addition, ground product must also declare those countries based on the weight of the raw ingredients in descending order. Because U.S. ground beef producers may source beef trimmings and raw materials from different nations in different quantities hour-by-hour and day-by-day, depending on cost and supply, this labeling system becomes utterly unmanageable and disrupts the free market.

What this guidance will do is force companies to source their meat not based on quality or price but on what will simplify labeling requirements. This is bad for livestock producers, bad for business and bad for consumers, who will be asked to pay a premium as a result of this misguided concept, says AMI.

The Food Marketing Institute says a simple package of hamburger produced with meat from three suppliers could be labeled "Beef (born in US, raised in Canada, slaughtered in US), beef (born and raised in Mexico, slaughtered in US), beef (product of Australia)." The end result will be a patchwork of confusing labels that conceal the product, it says.

4.3 AMI Congressional Testimony

In testimony before the US Congress in 1999 regarding the matter of COL, American Meat Institute President J. Patrick Boyle stated that mandatory country of origin labeling will result in enormous costs for U.S. livestock producers, meat packers, retailers and government. Among the groups who would bear the financial burden of mandatory country of origin legislation, said Boyle, are livestock producers, who would absorb hundreds of millions of dollars in costs to implement a verifiable audit trail to guarantee labeling accuracy. Meat packers would also expend hundreds of millions dollars annually due to increased costs for domestic vs. foreign product segregation, record keeping, inventory management, labeling and other plant operations.

Additional country of origin labeling costs of $375 million would be incurred by the retail industry, such as grocery stores and supermarkets.

In a separate statement in 1999, the AMI estimated that country of origin labeling proposals for beef and lamb will cost more than $1 billion per year[8]. In subsequent statements in 2002, the AMI continued to indicate that the $1 billion cost was still applicable. The following is a more detailed outline of those costs:

- AMI determined that in order for country of origin labeling to work, an entirely new mandatory animal identification system must be designed. Such a system would likely use ear tags to separate domestic from imported livestock and would cost livestock producers at least $268 million to implement.
- Livestock and meat segregation at slaughter would require new record-keeping procedures, separate accommodation in chilling, fabrication and storage, and a host of new labels at a total cost of $324 million per year to packers.
- Product segregation at retail markets also would be required and would include separate storage, cutting and grinding requirements, as well as new labeling and signage at a cost of nearly $73 million per year to retailers.
- Potential lost meat trade with Canada as a result of retaliation is estimated at $350 million per year in costs to packers and producers.
- Oversight of country-of-origin labeling requirements will cost the U.S. Department of Agriculture $60 million a year.

4.4 Agricultural Marketing Service 2002

On November 21 2002, the US Federal Register published the USDA's Agricultural Marketing Service's analysis of the costs of record keeping for the industry under the COL. The following is a direct excerpt of the AMS report:

4.4.1 Producers

USDA estimates that there are approximately 2 million commercial farms, ranches, and fishermen in the United States. Although a number of these farms, ranches, and fishermen may not produce products that are covered by these guidelines, or sell to outlets that would require their suppliers to adopt these guidelines, this analysis assumes that all of these farms, ranches, and fishermen will implement a system for the voluntary labeling of the country of origin for the products these farms, ranches, and fishermen produce. AMS estimates that the time required for a producer to develop a recordkeeping system that would meet the requirements of these guidelines to be 1 day. AMS estimates that the ongoing time required generating and maintaining the required records to be approximately 1 hour per month. Although AMS recognizes that many large-scale producers, such as large cattle feedlots, will require substantial more time than these estimates, AMS believes that the overall averages presented here to be accurate. For the purposes of this program, AMS also estimates the hourly rate, or value of time for a producer to be $25 per hour.

Accordingly, AMS estimates that the total burden for producers to develop a recordkeeping system that would comply with these guidelines to be 2 million producers x $25 per hour x 8 hours, or $400 million. In addition, AMS estimates that the total annual burden for producers to

[8] AMI Press release, April 28 1999
http://www.meatami.com/Template.cfm?Section=Current&NavMenuID=274&template=PressReleaseDisplay.cfm&PressReleaseID=57

generate and maintain the records required to comply with these voluntary guidelines to be 2 million producers x $25 per hour x 12 hours, or $600 million. Therefore, the total potential burden of this program on producers in the first year could be $400 million + $600 million, or $1 billion.

4.4.2 Food Handlers/Packers

AMS estimates that there are 100,000 food handlers. Although a number of these food handlers may not process or handle products that are covered by these guidelines or sell to outlets that would require their suppliers to adopt these guidelines, this analysis assumes that all of these food handlers will implement a system for the voluntary labeling of the country of origin for the products they process or handle. AMS estimates that the time required for a food handler to develop a recordkeeping system that would meet the requirements of these guidelines to be 2 days. AMS estimates that the ongoing time required generating and maintaining the required records to be approximately 1 hour per week. Although AMS recognizes that many large facilities, such as large-scale meatpackers, will require substantially more time than these estimates, AMS believes that the overall averages presented here to be accurate. For the purposes of this program, AMS also estimates the hourly rate, or value of time for a food handler to be $50 per hour.

Accordingly, AMS estimates that the total burden for food handlers to develop a recordkeeping system that would comply with these guidelines to be 100,000 food handlers x $50 per hour x 16 hours, or $80 million. In addition, AMS estimates that the total annual burden for food handlers to generate and maintain the records required to comply with these voluntary guidelines to be 100,000 food handlers x $50 per hour x 52 hours, or $260 million. Therefore, the total potential burden of this program on food handlers in the first year could be $80 million + $260 million, or $340 million.

4.4.3 Retailers

There are currently approximately 31,000 Perishable Agricultural Commodities Act licensee outlets that would be considered retailers and covered by these voluntary guidelines. Although a number of these retailers may choose not to adopt these guidelines, this analysis assumes that all of these retailers will implement a system for the voluntary labeling of the country of origin for the products they sell. AMS estimates that the time required for a retailer to develop a recordkeeping system that would meet the requirements of these guidelines to be 5 days. AMS estimates that the ongoing time required generating and maintaining the required records to be approximately 1 hour per day. Although AMS recognizes that many large retailers, such as supermarkets, will require substantially more time than these estimates, AMS believes that the overall averages presented there to be accurate. For the purposes of this program, AMS also estimates the hourly rate, or value of time for the employee of a retailer to be $50 per hour and that a retailer will work 7 days a week.

Accordingly, AMS estimates that the total burden for retailers to develop a recordkeeping system that would comply with these guidelines to be 31,000 retailers x $50 per hour x 40 hours, or $62 million. In addition, AMS estimates that the total annual burden for retailers to generate and maintain the records required to comply with these voluntary guidelines to be 31,000 retailers x $50 per hour x 365 hours, or $565.75 million. Therefore, the total potential burden of this program on retailers in the first year could be $62 million + $565.75 million, or $627.75 million.

Total Annual Reporting and Recordkeeping Burden for the First Year:
Estimated Number of Respondents: 2,131,000.
Total Annual Hours: 59,355,000.
Total Cost: $1,967,750,000.

4.4.4 AMS Summary

The AMS work is very basic, almost "back of envelop," type of review. The analysis fails to examine the real costs that would be borne by actual industry participants in order to comply. Furthermore, the AMS review only deals with record keeping. There are other inventory and logistical changes that would have to occur as well and this analysis does not address those costs.

4.5 Summary Points Regarding Pork Costs

Based on interviews as well as the secondary research discussed above, there are three key points to note regarding the cost of a mandatory COL program:

1. Costs for the entire US industry are going to increase regardless of whether they import Canadian pork or hogs.
2. Costs for those packers that utilize Canadian hogs are going to be higher than for those that do not.
3. Most of the additional costs itemized above are calculated under the assumption that the industry continues to import Canadian livestock.

As noted at the beginning of this section, we know that the costs for the US industry are going to increase but the order of magnitude will depend on what it will take to verify COL. Verification parameters are not yet known but will likely be determined by retailer legal departments to a large extent. Furthermore, these costs are likely going to be similar to traceback and identity preservation systems. These systems are slowly being put in place in Canada, at a cost as well.

There is another key point that is unknown or unclear and this was noted in section 3.2.1. That is whether retailer costs of handling 'product of Canada' pork will be greater than the costs of handling US pork. Based on the latest information regarding COL, as well as discussions with industry personnel, it is expected that US retailers *will* incur additional costs in handling Canadian pork shipped from Canada. The extra costs incurred relate to the need for separate storage and handling. This is a result of the fact that the regulations will by default require an additional stock-keeping unit. Interestingly, however, it is expected that retailers will have to create additional stock keeping units for each of their US suppliers as well. As such, based on current thinking and for the purposes of the analysis below, it will be assumed that with regard to retail handling, Canadian pork imports will not be at a cost disadvantage to US pork.

4.5.1 Estimated Hog and Pork Costs

Again it must be reiterated that very little is actually known or understood regarding the actual costs of COL. The lack of information extends from the USDA through the GAO, industry associations and private firms. As such the estimates below are admittedly based on a shallow pool of knowledge. Nevertheless, there are recurring themes through all estimates related to the major areas of where the costs will lie and the order of magnitude of total costs. The following

discussion then is based on a synthesis of what has been written as well as what industry participants are considering. In other words it represents the base of knowledge in the industry at this early point in time.

For the purposes of this evaluation, the estimates published by Cattle Buyer's Weekly (CBW) will be applied to the pork industry. It is noted that the CBW work is consistent with the GAO and AMI categorizations while being conservative in its calculations and approach. Furthermore, the CBW categorizations and gross cost calculations are consistent with the feedback received from industry participants. Based on CBW's analysis, and modified to reflect feedback from industry participants, the following are the expected costs of COL to the US pork industry participants *who choose to continue to import Canadian hogs and pork*:

Producers:	$1/head
Packers:	$5-10/head
Retailers:	$2/head
Total:	**$8-13/head**

The producer estimate is much lower than the $5/head CBW applies to the cattle industry. Due to the wide differences in the nature of the cattle and hog industries and the associated inventory challenges, it is expected that hog producer costs will be far less than their cattle producer counterparts. In addition, segregation and sorting of Canadian hogs is already commonplace for US finishers. Furthermore, in order to comply with the regulations, it is expected that the costs will be the same for both US and Canadian sourced hogs.

The packer cost of $5-10/head is much lower than the CBW estimate for cattle. This is because it is assumed for the purposes of this report that the exhaustive new systems that many envision as being necessary to comply with COL may not be necessary. If in fact new extensive traceback systems were required, then the CBW estimate of $15 would be most appropriate.

The estimated retail cost is also lower than the CBW estimate. The lower cost is assumed because it is expected that retailers will adopt sourcing and product specifications to reduce costs under COL. For example, it is expected that COL will hasten the industry's move towards case ready pork. In addition, as noted above, it is assumed that the cost to the retailer for Canadian pork will be the same as for US pork. While Canadian pork may have some added logistical problems, the source verification process will be much easier than for US product. This is because customs documentation will suffice for proof of a "Product of Canada" label, but much more effort will be required to prove "Product of the US."

It is expected that under COL the producer and retailer will not see added direct costs to handling Canadian pork or hogs. In other words, COL is going to cost the retailer and producer about $2/head and $1/head extra respectively regardless of whether the product is Canadian or not. It is the packer that will bear the largest costs if the decision is made to continue to purchase Canadian hogs. These costs will amount to about $5-10/hog. Without purchasing Canadian hogs, packers are now assuming they will not bear additional costs. In fact, the legislation will impose additional costs but that amount is not known. A cost similar to the producer cost of $2/head is likely.

The following table summarizes the expected costs:

Table 1

	Cost of COL in US$/Head		
	Procuring Canadian Hogs or Pork	**Not Procuring Canadian Hogs or Pork**	**Difference in Costs for Canadian or Not**
Producer	1	1	0
Packer	5-10	2	3-8
Retailer	2	2	0
Total	**8-13**	**5**	**3-8**

Another point needs to be made clear with regard to proof of country of origin. The assumption being made here is that for those who decide that they will only take US hogs or pork, the requirements of the legislation will be met with more extensive record keeping and enhanced audit systems. This is a point of debate and contention. There is a school of thought that says that the only way to comply, regardless of whether only US product is used is through an extensive traceback and identity preservation system. If this school of thought is correct, then the costs to the US system will be much greater than those in the column "Not Procuring Canadian Hogs or Pork." In other words, the US may be imposing much greater costs on their industry than is known right now.

Finally, the costs listed above are direct costs borne by each of the participants. These costs will result in lower bid prices for hogs. As such, the producer will bear the brunt of the direct costs on the sectors further along the chain.

5.0 US Market Overview

This section of the report provides an overview of the magnitude and significance of hog and pork imports in the United States.

5.1 US Pork

5.1.1 US Share of World Pork Supply and Demand

The table in Appendix B provides an overview of world production, exports, imports and consumption. The series of graphs following the table in Appendix B provide an illustration of the data trends as they relate to the US market. The imports and exports represented in the table and graphs are for pork products only. The trade data does not include live animals.

The following is a summary of the information conveyed by the tables and graphs in Appendix B:

- Imports as a share of total US pork consumption has been gradually increasing. In 1997, imports comprised less than 4% of total consumption. By 2002, the USDA is estimating that imports will comprise about 5.5%.
- Pork imports into the US have been rising relative to the total volume of world imports. In 1997 US imports were 11% of world imports. In 2002, the USDA estimates that US imports are about 13.5% of world imports.
- US exports as a share of US production have been increasing from about 6% in 1997 to an estimated 8% this year.
- The US share of world exports has also been rising. In 1997 the US exported about 17% of world exports. By 2002, that total had risen to 18.5%.
- The US share of total world production and consumption has been staying relatively steady at about 10-11% for both. From 1997 though 2002, US and world production increased by 15%.

5.1.2 Canadian Share of US Pork Imports

During the early 1990's, US imports of Canadian product were increasing but on a relatively steady or slow pace. From 1992 to 1996, Canadian exports to the United States grew by 8%. Since 1997, however, Canadian pork exports to the United States have risen dramatically. From 1997 through 2001, exports grew by nearly 77% (see Figure 1 below). Over the period 1992 though 2001, Canadian pork also increased its share of total US imports. In 1992 Canadian imports were 67% of US imports while in 2001 the share was 82% (see Figure 2).

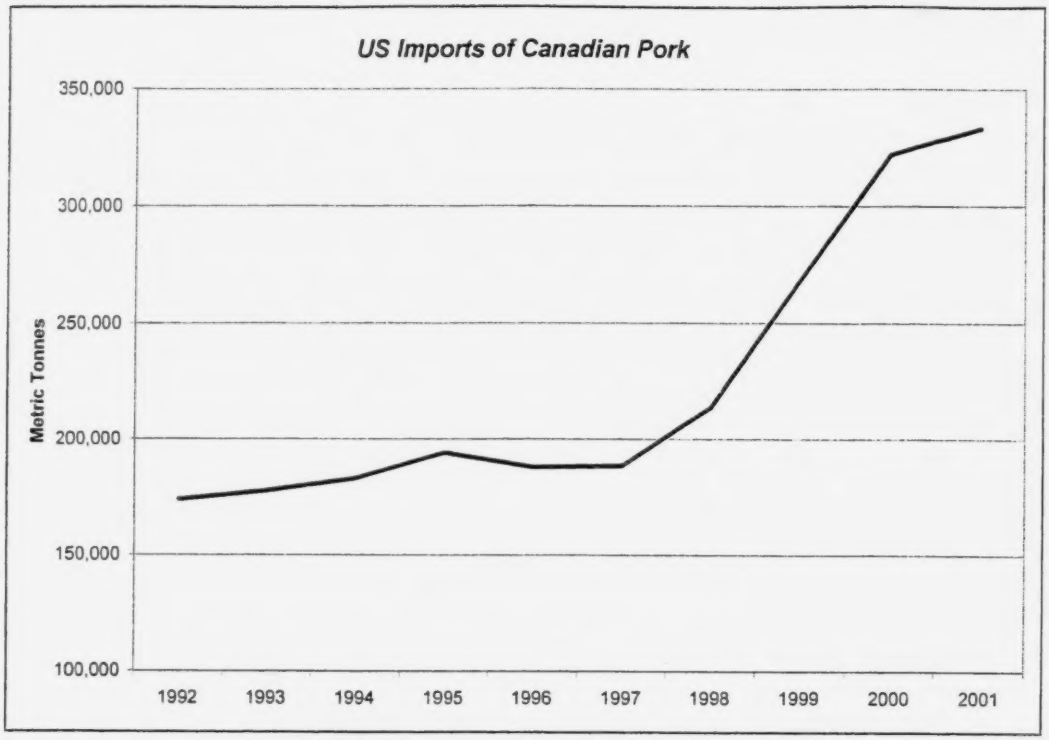


Figure 1 Source: USDA FATUS

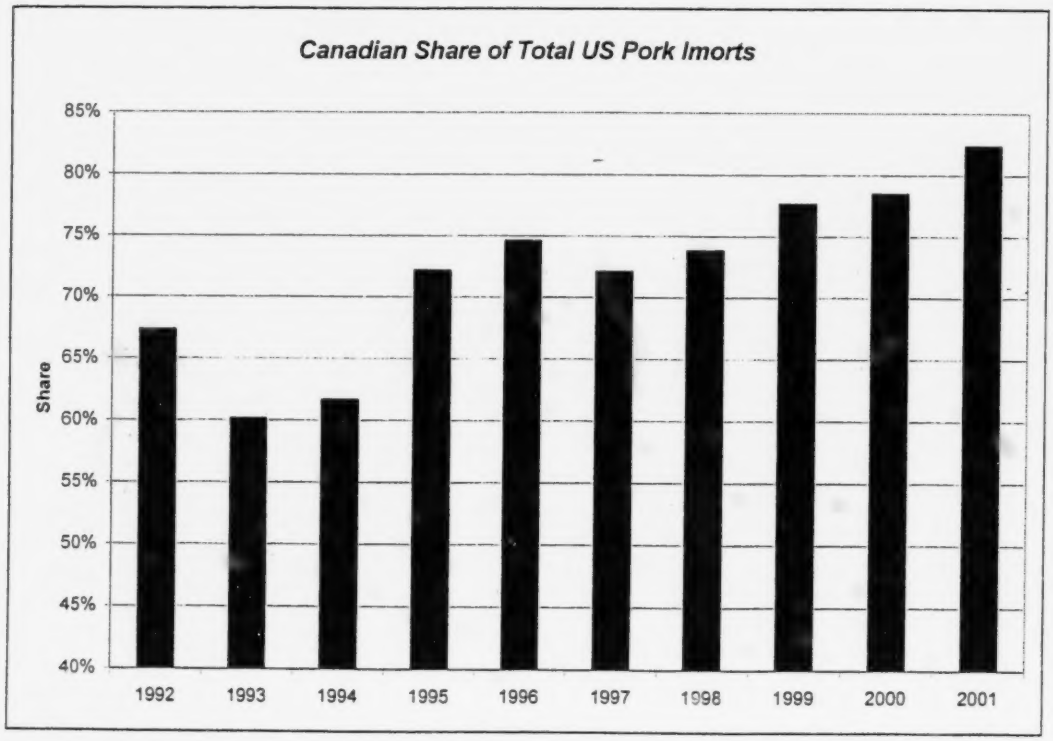


Figure 2

5.1.3 Summary Points Regarding US Pork Trade

- US share of world production and consumption is stable.
- US share of both world imports and world exports have been increasing
- US share of world exports have been on average about 47% greater than the US share of world imports from 1997 to 2001.
- US exports averaged about 581,000 metric tonnes from 1997 to 2001, compared to imports of 370,000 tonnes, a 57% difference
- US imports and exports have both grown by about 50% from 1997 to 2001.
- US import share of total US consumption amounted to 5.1% in 2001.
- Import share of total US consumption has increased by 37% from 1997 to 2001 (3.7% share to 5.1% share).
- Canadian share of total US imports has been growing dramatically from 67% in 1992 to 82% in 2001.
- Canadian share of total US pork consumption amounted to about 4% in 2001 compared to less than 3% in 1997.

It is important to note that although US pork imports and in particular imports of Canadian pork have increased dramatically during the last five years, the share of total pork imports in the US industry when measured against total production, supply and demand is very small.

5.2 US Hogs and Pigs

The purpose of this section of the report is to provide an overview of the US situation regarding slaughter and live hog imports from Canada.

5.2.1 US Slaughter and Slaughter Capacity

US hog slaughter during 2000 and 2001 was about 98 million head. Expected slaughter in 2002 should amount to around 100.4 million head.

US slaughter capacity was at its peak in late 1996-early 1997. At that time, U.S. daily hog slaughtering capacity was estimated to be about 412,000 head. It is currently estimated to be from 396,000 to just fewer than 400,000 head. Appendix C shows the National Pork Board's listing of plants and their daily capacities from 1995 through 2002. Appendix C shows total daily capacity as of early 2002 amounted to 381,000. The divergence between the Appendix C and the overall estimate of 396-400,000 head is explained by the fact that there are plants that are not on the list. Furthermore as noted earlier, experience is that the industry can run 15,000-17,000 head per day above the listed number. For example on November 1 this year, slaughter was 396,000 head.

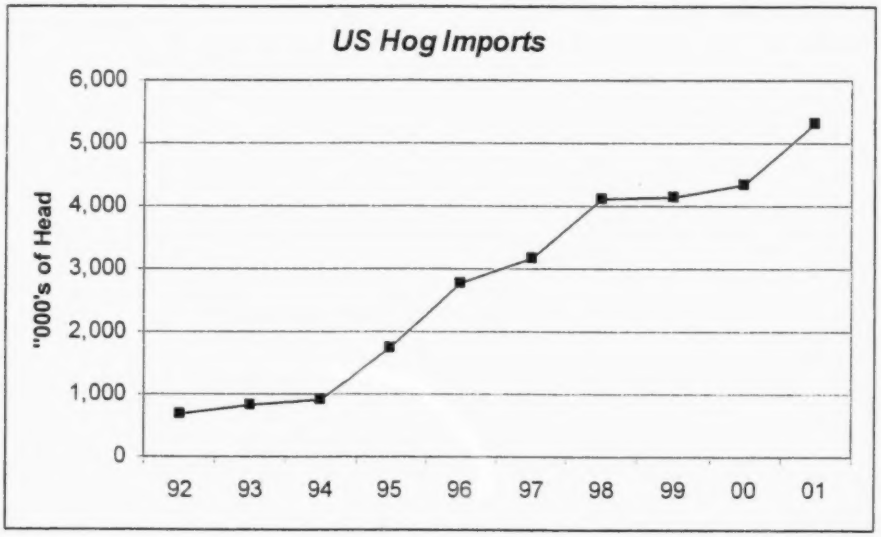
Industry sources say there are two or three older facilities currently operating that are considered to be "on the bubble" for closure in the next few years. In addition, Hormel Foods announced that it intends to close its Rochelle, Illinois plant in the near future. That plant can slaughter over 4,000 head per day.

5.2.2 US Hog Imports

The following table and graphs show US imports of live hogs from 1992 through to the estimated total for 2002.

US Imports of Live Hogs											
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Live Hogs											
<50 Kg	226,896	282,760	400,034	651,096	766,974	987,427	1,466,134	2,083,454	2,336,048	3,163,962	3,828,394
>50 Kg	445,794	557,166	516,632	1,097,169	2,011,219	2,188,962	2,656,297	2,052,895	2,016,931	2,152,298	2,066,206
Total Imports	672,690	839,926	916,666	1,748,265	2,778,193	3,176,389	4,122,431	4,136,349	4,352,979	5,316,260	5,894,600

Table 2 Source
USDA FATUS



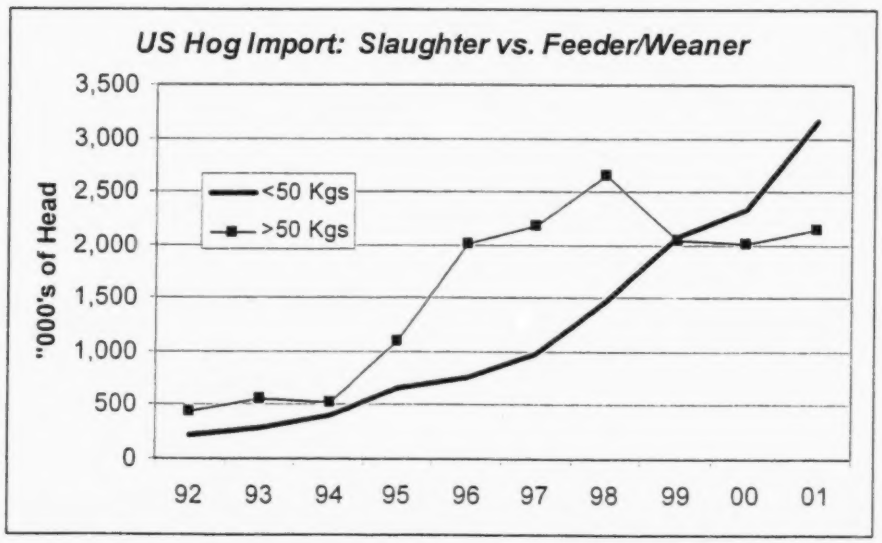


Figure 3 Source: USDA FATUS

The following are key statistical points regarding live imports:

- While other countries may ship breeding stock to the United States, for practical purposes, Canada is the only shipper of live hogs to the United States.
- US live hog imports increased by a factor of 6.9 between 1992 and 2001.
    - Imports increased by over 300% between 1992 and 1996 and by 67% between 1997 and 2001
- The USDA Foreign Agricultural Service (FAS) data set breaks the import tally down by hogs that are above or below 50 kilograms. For the purpose of this report, those above 50kgs will be considered slaughter hogs and those below will be considered feeder/weaner pigs.
- Slaughter hog imports increased by a factor of 3.8 between 1992 and 2001.
    - Slaughter hog imports increased by 350% between 1992 and 1996 and declined by 2% between 1997 and 2001.
- Feeder/weaner pig imports increased by a factor of 12.9 between 1992 and 2001.
    - Feeder/weaner imports increased by 238% between 1992 and 1996 and by 220% between 1997 and 2001.
- Feeder/weaner imports began exceeding slaughter imports in 1999.
- In 2002 feeder/weaner imports will exceed slaughter imports by 1.76 million head or 85%.
- Assuming yearly US hog kill of 100 million head this year, total Canadian hog imports amounted to just under 6% of the US hog slaughter. Canadian feeder pigs comprise just under 4% of yearly kill and slaughter hogs comprise just over 2%.
- Assuming a 185-pound carcass, total pork tonnage from Canadian feeder and slaughter hogs amounted to 446,000 tonnes in 2001.
- Combined tonnage from Canadian pork exports and live hogs amounted to just under 10% of US consumption in 2001.

With regard to the surge in weaner exports, it is to be noted that the George Morris Centre completed research in early 2002 that indicated the US had a competitive advantage over Manitoba in finishing hogs and that Manitoba had a competitive advantage in farrowing. The finishing advantage was caused by high drought and fusarium-influenced grain prices. Manitoba weanling producers have been responding to strong market demand from the US mid-west.

5.2.3 US Slaughter-Price Relationships

The following two graphs in Figures 4 and 5 show the basic relationships between slaughter volumes and hog prices in the United States. Figure 4 shows the trend from 1970 through 2002 while Figure 6 illustrates the same data from 1980 through 2002.

Both graphs illustrate an expected relationship between slaughter and price. They demonstrate that for any given period of time, when slaughter increases (decreases), price decreases (increases). Figure 4 also shows that the longer-term trend in slaughter/production levels has been increasing, and overall price levels have been trending sideways. Figure 5 shows the same slaughter price relationship but in a scatter-diagram format. Each dot represents a year in the production-price relationship. The graph shows that the greater the slaughter the lower the price. This relationship trends roughly around the diagonal trend-line that crosses from the upper left corner to the lower right corner.

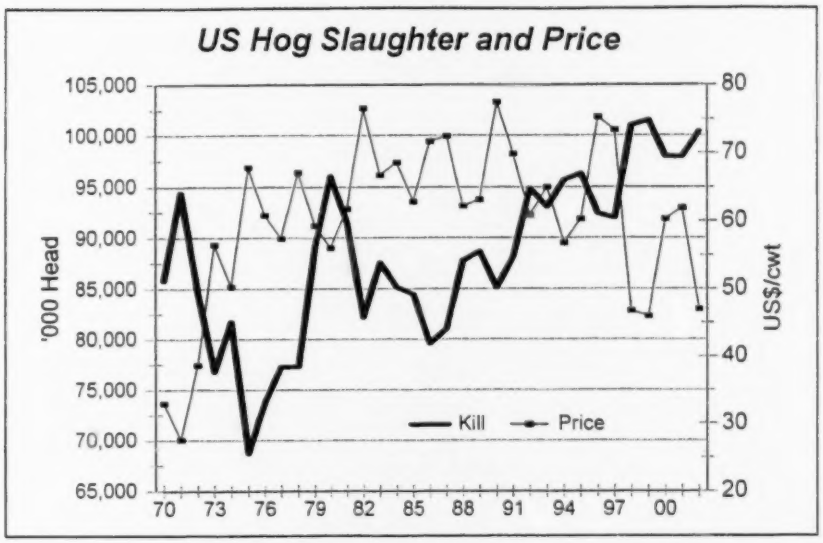


Figure 4

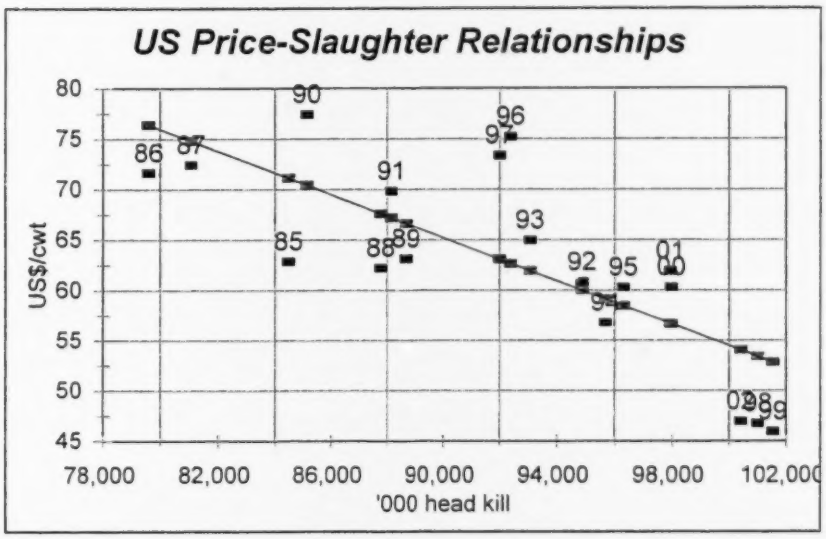


Figure 5

The strength of this relationship can be measured by regressing the dependent variable (price) against the independent variable (production). From 1990 through 2001 the proportion of the variation in the price that is explained by using this regression equation is just under 80%. This means that 80% of the variation in price can be explained by changes in slaughter. Other factors would include total meat production and changes in trade trends (foot and mouth incidences, etc.). On a quarterly basis from 1990 through 2001, this value was roughly the same. Overall, this statistical analysis indicates that, as expected, there is a strong negative relationship between price and slaughter in the United States.

Once it is agreed that there is a strong relationship between price and production, the next step is to evaluate the responsiveness between the two variables. In other words, how much price

changes when slaughter or production changes. One key point is that the flexibility or responsiveness has been increasing over the years. Recent analysis by Sparks Companies in Memphis shows that from the 1980's through the last four years, the price responsiveness or flexibility has increased significantly. The following are the Sparks findings, where the values are the percent change in price that resulted from a one percent change in pork production.

- 1983-87: 1.9
- 1988-92:3.0
- Mid-1990's: 4.7
- Last five years: 5.2

In fact in the last four years price responsiveness has increased even more; a 1% shift in pork production now results in a 10.5% change in the lean hog price.

This is an important point with regard to Canadian hogs and the US price-supply relationship. Given that Canadian hogs represent 6% of the US slaughter, anything that reduces that import total would have major effects on the US price in response.

6.0 Canadian Industry Overview

6.1 Canadian Slaughter

Total Canadian hog slaughter will amount to about 21.7 million head in 2002. This is an increase of 6% compared to last year. Between 1997 and 2002, Canadian slaughter has increased by over 40%. Figure 6 shows the trend in Canadian hog slaughter (federal and provincial) from 1990 through 2002.

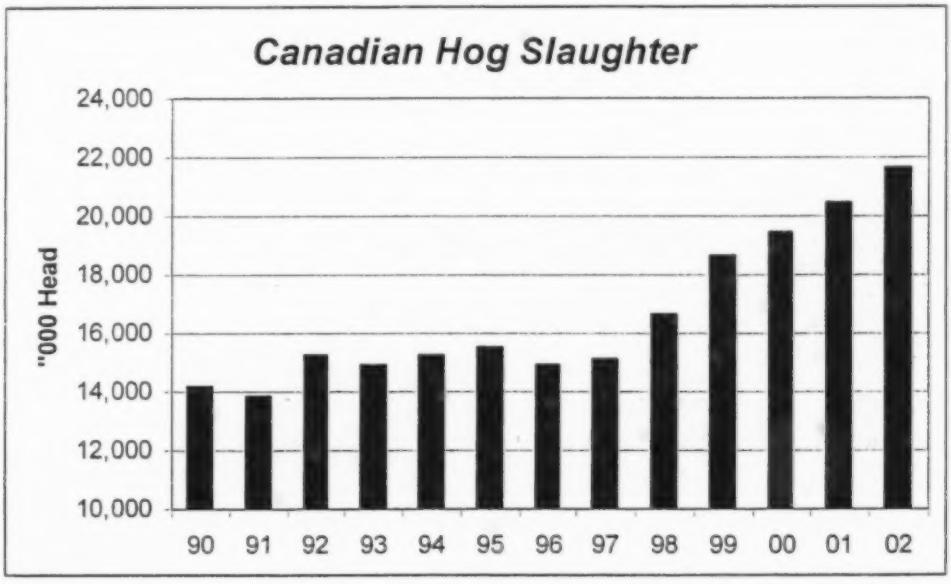


Figure 6

6.1.1 Canadian Slaughter Capacity

Appendix D contains a list of the larger Canadian hog slaughter plants and their capacities. The grand total of these plants shows a total weekly capacity of about 447,000 head. As is the case with the US plants listed in Appendix C, the total of the listed plants is less than the actual volumes slaughtered in certain weeks. For example, in 2002, slaughter hit over 470,000 head in one week. Part of the explanation for the difference is the presence of many provincial plants that slaughter over 20,000 head per week. The other major factor is that actual slaughter capacity of some of the listed plants can be stretched when markets dictate.

For the purposes of this discussion, total Canadian slaughter capacity is considered to be 465,000 head per week. This compares to 450,000 in 2001 and 410,000 in 2000. In 1997-98 slaughter capacity was just 350,000 head. From 1997 to 2002, Canadian slaughter capacity has grown by one third. Over the period from 1997 to 2002, prairie hog slaughter capacity has grown from 120,000 head per week to 175,000 head per week, an increase of 46%. It is of interest to note that despite the growth in hog slaughter capacity on the prairies, the three provinces still only

have the combined capacity of the province of Quebec. Figure 7 shows trends in prairie hog slaughter versus Canada as a whole.

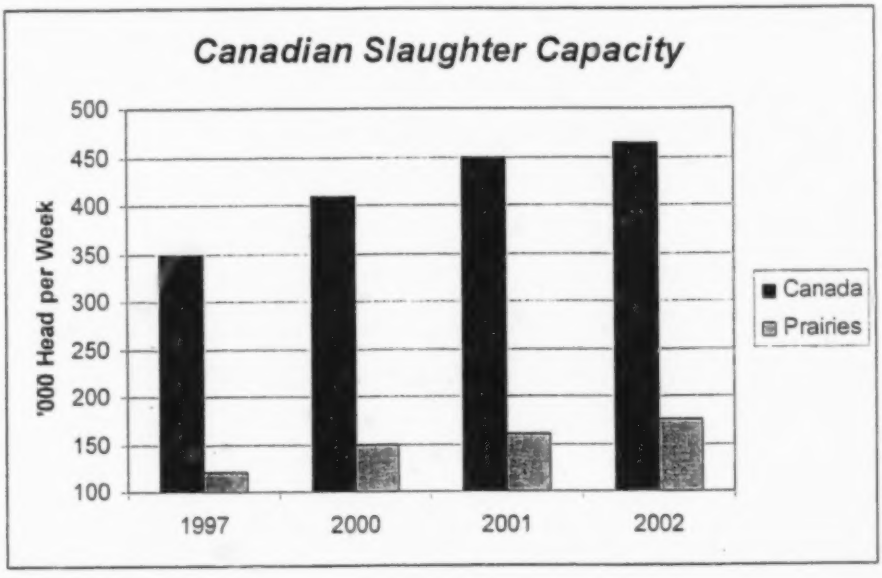


Figure 7

As of now, other than one packing plant in Quebec, no Canadian packer is double shifting the operation. This is in contrast to US plants that are almost universally double shifted. Double shifting significantly reduces per head slaughter costs by distributing the fixed overhead over a larger number of hogs. It is expected that Maple Leaf will double shift its Brandon plant (current capacity 45,000 head) within the next two years. It is also expected that this will be accompanied by the closure of the company's Winnipeg slaughter facility (up to 20,000 head).

6.2 Canadian Pork Trade

Section 5.1 outlined the overall trend in Canadian pork exports to the United States. This section is designed to outline trends in Canadian pork exports to the United States and other countries. .

The Canadian pork industry requires exports in order to survive at its current size. Over the last five years, pork production exceeded domestic consumption by about 50%. Canadian pork exports have been surging in recent years - from 1997 through 2001 Canadian pork exports almost doubled. Figure 8 shows total Canadian pork exports to all countries.

The US was the destination for 45-51% of total Canadian pork exports over the last four years. The following pie chart (Figure 9) shows the share of Canadian exports by country. Japan accounts for about 20% of total Canadian exports and Mexico and Korea have taken about 8% and 4% respectively. The "Other" category includes a large number of countries that import about 1-2% of all Canadian exports.

In recent years, Agriculture Canada data indicates that about 84% of Canadian pork export tonnage to the United States was fresh or frozen as opposed to processed. Total exports to all countries were about 90% fresh and exports to Japan have been almost all fresh/frozen.

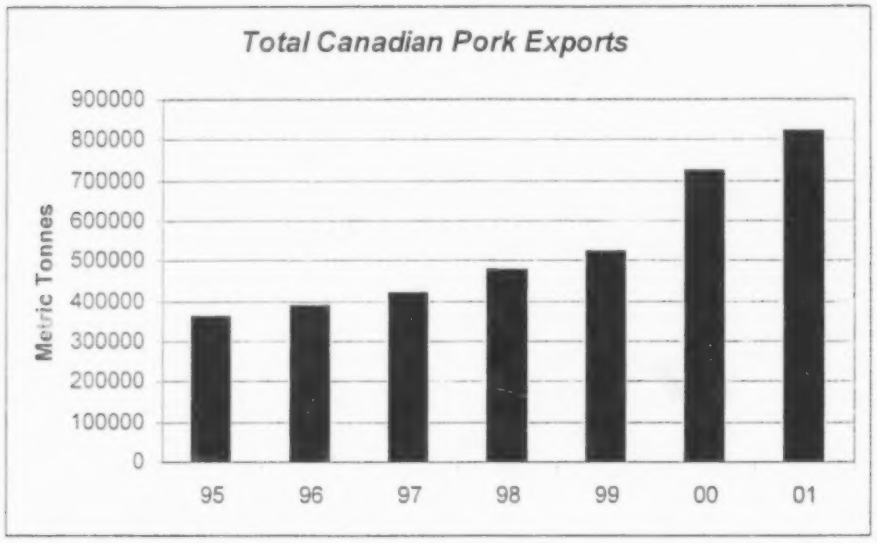


Figure 8

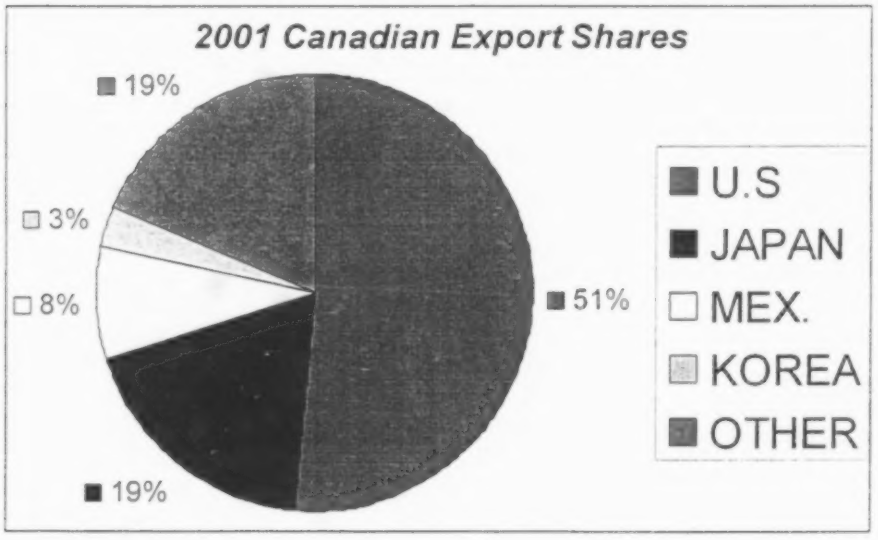


Figure 9

According to industry participants, Canadian pork exports to the United States occur almost uniformly throughout the year. In addition, pork trade to the United States involves the full cross section of pork cuts. While the full cross section of cuts moves to the United States, the following is a listing of the major fresh/frozen cuts in order of magnitude:

1. Hams
2. Shoulders
3. Bellies
4. Backs/loins

The North American market is effectively one market with respect to pork. Trade to the United States is fully developed between well-established business links. US customers are primarily processing or distributor entities that further cut, bone or process the Canadian products. These products then flow into the retail and foodservice channels along with US product. That is the primary or first-line customers of Canadian pork in the US are not retailers.

6.2.1 US Market Significance

As noted above, Canada exported about 800,000 metric tonnes of pork in 2001 of which about half went to the United States. The 400,000 metric tonnes exported to the US represents production from well over 4.7 million hogs. This is in addition to the 5.3 million live hogs that were exported to the United States in 2001. Total Canadian hog marketings in 2001 of 25.8 million head are the grand total of slaughter and live exports. The US provides a market for 10 million head of the total 25-26 million head marketed each year. This means that the US represents combined pork and live market share of over 35% of total Canadian hog production.

7.0 Country of Origin Impact Scenarios

The purpose of this section of the report is to outline three possible scenarios for Canada under the imposition of mandatory country of origin labeling beginning in October 2004. Three scenarios were chosen, one being negative and the other two positive. The reality of course is that there are a many permutations and combinations of scenarios that are possible and that could evolve between now and 2004. These specific negative and positive scenarios were chosen because they are realistic or possible outcomes. They are scenarios that the industry could see develop and should or could prepare for. The negative scenario is outlined in greater detail because it is a economic "shock" that is imposed by an external action, i.e. COL. The two positive scenarios are not outlined in great detail because they involve scenarios in which the Canadian industry adapts to COL.

The focus of the scenarios is the Canadian impacts of COL. The various industry participants in the US will see positive and negative impacts of COL, but it is not the intent of this report to examine US impacts.

7.1 Negative Scenario

7.1.1 US Developments

The following are the possible US developments that could occur between now and October 2004 that would be considered negative to the Canadian industry:

1. US packers and hog finishers decide not to buy Canadian hogs.
2. US retailers decide not to purchase Canadian pork.

7.1.2 Canadian Situation

Under this possible negative scenario, the US decisions might be made relatively close to the 2004 deadline. This would leave the Canadian industry unprepared, which would result in the following (based on 2001 data).

1. There is a shortage of finishing space in Canada for at least 1 million weaner hogs (the 3 million hogs shipped to the US each year are turned over three times per year).
2. There is a shortage of packing capacity in Canada for at least 2 million slaughter hogs per year plus the additional 3 million weaners – a total capacity shortage of 5 million hogs.
3. Additional packing capacity exists or is created for approximately 1 million hogs per year.

Weaner/Feeder Market

The first impact in Canada would be on the weaner/feeder market, as the loss of the US market would immediately increase the availability of weaner hogs in Ontario and the prairies by about 20-25% (3 million weaners vs total finished marketings of 13 million). The impact on the weaner market would be very difficult to discern given the lack of precedent for an occurrence of this magnitude. Based on slaughter hog market elasticities in recent years, these additional weaners could become essentially worthless. Even using very conservative elasticity measures the current weaner prices could be reduced by 50%.

Regardless of the elasticity measure, the resulting price impact on the weaner market would be to drive prices well below the cost of production and in turn drive independent weaner producers out of the market.

Slaughter Hog Market

Producers who ship slaughter hogs to the US would also lose this market. On an annual basis, this would imply an additional 2 million slaughter hogs on the Canadian market. It must be assumed that Canadian packers would honor their current contracts, which are tied to the US market. These formerly US-bound hogs, however, would not be subject to those Canadian contracts and would result in a surge of spot market hogs in Canada.

The volume of slaughter hogs sold on contracts in the West has risen dramatically in recent years. Previous research by the George Morris Centre indicates that about 90% or more of Ontario slaughter hogs are sold on contract. The prairie volume is in the 80% or more range.

The additional hogs would amount to roughly 35-40,000 head per week (2 million/52 weeks). Total Canadian slaughter amounts to about 22 million head per year (in 2002) for a weekly average of approximately 425,000 head per week. Total Canadian capacity amounts to about 465,000 head per week. As such, Canadian capacity would be stretched to the limit but could in fact handle all the extra slaughter hogs (there would be seasonal problems in the fall).

The question then would become the price of these slaughter hogs. Given that they are not on contract and that they would stretch capacity to the limit, it is expected that these hogs would be discounted significantly. Again based on current elasticities for slaughter hog prices, it is expected that these hogs would be discounted by over 40%. Manitoba prices for index 100 hogs during October 2002 were approximately $130/ckg. Producers marketing these hogs that would formerly have been shipped to the United States could reasonably expect to be paid less than $80/ckg.

While there would be a temporary market for these slaughter hogs, the packing industry would be facing constraints and problems of its own (see below). As such it is not reasonable to expect that all of these added hogs would eventually be to be taken on as contract hogs.

Pork Packing

The packing industry would also be impacted by its inability to export pork to the United States. Canadian packers would need to find another market for 300-400,000 tonnes of pork. This amounts to about 20% of Canadian packer production. There is an argument to be made that approximately half or more of the Canadian tonnage would find its way into foodservice channels or into processing meats. While that is ultimately true, the fact is that the importers of Canadian pork tend to be boners or processors. These processors may not choose to bring Canadian product into their lines for the same reason that US packers would not want Canadian hogs. Under the best case within this negative scenario, Canadian packers would lose a market for a minimum of 10% of total production.

Whether 10% or 20%, this extra tonnage would be both exported to other countries and sold in the domestic Canadian market. There may be additional market share available in the non-US export market due to the fact that US export tonnage would be diverted back to the domestic market to make up for lost imports. Nevertheless, this extra Canadian produced tonnage would

be discounted in the export market and would cause all Canadian pork products to be discounted in the domestic market. More importantly, the pork cuts that are exported to countries other than the US are not the same cuts that would have flowed to the US. Each market demands different cuts and it is not a simple trade-off.

The pork market would also be impacted by similar conditions in the beef market. The additional tonnage of beef in the Canadian market would cause downward pressure on the pork market.

Packers would therefore likely be in a position of paying US equivalent prices for 80% of their slaughter hogs while at the same time receiving large discounts on most of their production. As such, while Canadian producers would be expecting the packing industry to take on extra hogs, the market for hogs would likely result in serious financial stress to packers. This could in fact result in a loss of packing capacity if the stress results in plant closures.

Short Term Hog Price and Income Impact Summary

1. The market for 3 million weaner/feeder pigs would disappear resulting in an annual income loss of $162 million[9]
2. Prices would initially be reduced by at least 40% on at least 1 million slaughter market hogs (2 million hogs per year are exported to the US but it is assumed that one million would not enter the production cycle once COL became mandatory). Price reductions on these 1 million head would amount to about $40/head or a total of $40 million.
3. It is assumed that Canadian packers would only find shackle space on a consistent basis for 1 million of the total 2 million slaughter market hogs. Assuming a long-term average price of $160/ckg, this would result in an annual revenue loss of about $150 million

7.1.3 Longer Term Impacts

The disappearance of the US market for feeders/weaners will result in severe disruption and losses for the farming operations that are focused on that market. The overwhelming majority of these operations are in Manitoba and Ontario. This is compounded by the surplus of slaughter hogs in the Canadian market. It is not known how many farms are dedicated to this US weaner market but Statistics Canada data for Manitoba indicates that approximately 262 farms are farrow only operations. It is reasonable to assume (based on industry input and production proportions) that at least 100 are focused on this weaner export business.

There are varying ways to demonstrate the impact of a closed border on the Canadian hog industry. One approach is to bring the exports back to the potential number of farms involved in that business. If roughly 3 million weaners are exported, it means that there were at least 150,000 sows as the breeding herd for those exports (assuming 20 pigs per sow per year). Using Manitoba as a base, it is noted that the 262 farrowing-only farms have an average of 549 sows and gilts for breeding. Using these averages indicates that approximately 250-300 farms, mostly in Ontario and Manitoba, would be at risk if the border were closed to weaner exports.

Market hogs are also impacted. If shipments of 2 million market hogs are stopped, and if we assume that the Canadian packing industry can take up about 1 million of these hogs, then the

[9] United States Department of Commerce data for hogs less than 50 pounds had a 2001 import value of US$ 102M (fas.usda.gov)

production operations and finishing capacity for another 1 million hogs are going to be without a market. Using census numbers from Manitoba farrow to finish operations, there were about 320 sows and gilts per farm in the province. Again assuming 20 pigs per sow per year, this implies that upwards of 150 farrow to finish operations are at risk.

As such, under a negative scenario, it is conceivable that 450 hog farms could go out of business, mostly in Manitoba and Ontario. This is a conservative estimate for a number of reasons, including the assumption of only 5 million export hogs. This is the 2001 figure instead of the 2002 figure, which will be closer to 6 million head. Other conservative aspects of the calculation included using Manitoba as the base for the averages. Manitoba averages are larger than other those for other provinces so this decreases the number of farms impacted. Finally, the assumption of 20 pigs per sow is conservative as well.

Based on current export trends by province, the farms at risk in Manitoba could amount to more than 250 or over 15% of the hog farms in the province.

Feed Industry

The feed industry will also be negatively impacted by the loss of 3 million weaners and 1 million market hogs. The following assumptions are used for illustration of the impact:

- Each sow in production eats about 1000kg of feed / year
- Each weanling (5.5 kg to 24kg) eats about 27 kg of feed
- Each feeder pig (24 kg to market) eats about 260 kg of feed
- One feed mill has a capacity of 100,000 tonnes
- A 100,000 tonne feed mill employs 12-15 people

Impact Due to Weaners

- The sows gone due to weaner losses would mean a lost market for 150,000 tonnes
- Three million weaners up to 24kg lost would mean a lost market for 81-85,000 tonnes
- Total lost feed markets due to the impact on weaners is up to 235,000 tonnes

Impact Due to Market Hogs

- Sows gone due to market hogs lost would mean a lost market for 50,000 tonnes
- One million finished hogs lost means a lost market for (27+260)*1,000,000 = 287,000 tonnes
- Total lost feed markets due to the impact on finished hogs is 337,000 tonnes

The grand total loss of market to the feed industry amounts to (337,000+235,000) = 572,000 tonnes. For reference regarding the magnitude of this tonnage, feed industry participants estimate that total Manitoba feed milling capacity is about 1.2 million tonnes. Even if Manitoba only felt the brunt of one-third of the feeding impact, the consequences for the feeding industry in the province would still be very large.

Another way to look at the feed impact is to note the effect on crop production. The loss of a market for 570,000 tonnes of feed represents about 250,000 acres of cropland.

The loss of a market for feed in turn would therefore jeopardize six feed mills in Ontario and the prairies. This in turn could result in the loss of 90 feed mill jobs and resulting spin-offs.

7.1.4 Alternative Negative Scenario Estimate

Another way to examine the negative scenario is to note that 9-10 million of Canada's 27 million hogs marketed ultimately end up in the United States. This is comprised of about 4-5 million that are sold as pork and 5-6 million that are shipped live. If it is assumed that one half of Canadian pork exports are diverted to foodservice, then about 2-3 million head will still move south as pork. With regard to the 5-6 million head moving south live, as noted above, it is expected that about 1 million of those hogs will find their way into the Canadian hog slaughter sector (see above). As such, it can be reasonably assumed that the market for about six million hogs will be jeopardized (two million formerly as pork exports and four million as live exports).

The six million head represent about 20% of the Canadian hog industry, which had total sales of $3.9 billion in 2001. If 20% of the industry is lost, the total impact amounts to over $750 million. Alternatively, there are nearly 15,500 hog farms in Canada. If 20% of operations are lost this amounts to over 3,000 farms.

7.1.5 Summary: Negative Scenario

Under one of many possible negative scenarios that could evolve, the Canadian hog and pork industry stands to lose:

- Over 450 hog farms
- Farm income totaling over $350 million.
- As many as six feed mills
- A market for 250,000 acres of cropland would be lost.

➢ There is also a rational argument to be made that up to $750 million in farm income could be lost, along with over 3,000 farms.

It is important to note that this is just one scenario and that conservative assumptions were used. Another impact that could occur under this scenario is the closure of a packing plant due to lost business. This is entirely possible and in turn would result in even greater losses to the industry.

7.2 Positive Scenario 1

A positive scenario under mandatory country of origin labeling is defined as "business as usual." That is, a positive (or neutral scenario) COL scenario is one under which COL has neither a positive or negative impact.

7.2.1 US Developments

The following are the possible US developments that could occur between now and October 2004 that would be considered neutral to the Canadian industry:

1. US packers develop handling, sorting and merchandising methods that result in Canadian hogs being no more or less expensive than US born and raised hogs. As such, US finishers continue to take Canadian weaners and US packers continue to take Canadian market hogs, as is currently the case. This might take the form of packer dedicating a

plant to exports using Canadian hogs or plants dedicating a specific day or shift to Canadian hogs.

2. US retailers and other processor buyers determine that Canadian pork is no more costly to merchandise than US pork and they continue to purchase Canadian pork. In addition, they continue to purchase pork from US packers that originally came from Canadian hogs.

7.2.2 Canadian Situation

Canadian producers and packers continue their pre-COL business strategies, responding to market signals in both Canada and the United States. Under this positive scenario, Canadian producers and packers contract or grow their operations in a manner that is totally unaltered by COL.

7.2.3 Summary: Positive Scenario 1

This neutral or positive scenario is possible given the information that is now available. It will be almost entirely dependent upon US packers' evaluations of the costs and benefits of maintaining their supply of Canadian hogs. The benefit of maintaining their supply of course is the fact that they require those hogs for the efficient operation of their plants. This factor is amplified by the very wide price fluctuations that affect the industry as outlined in section 5.2.3.

7.3 Positive Scenario 2

Another positive scenario under mandatory country of origin labeling is one in which the Canadian industry takes advantage of the fact that the United States has imposed significant costs on its own industry. While the US has imposed these costs on its red meat industry, the Canadian industry is not similarly burdened.

7.3.1 US Developments

The following are the possible US developments that could occur between now and October 2004 that would be positive to the Canadian industry:

1. US packers and hog finishers decide not to buy Canadian hogs.
2. US retailers determine that Canadian pork is no more costly to merchandise than US pork and they continue to purchase Canadian pork. In addition, they determine that consumers favor Canadian pork and that Canadian pork is less expensive than US pork due to the lack of COL compliance costs in Canada.

7.3.2 Canadian Situation

Canadian packers and producers take the following strategic steps:

1. Finishing space is expanded on the prairies and in Ontario to handle an additional 1 million slaughter hogs.
2. Packing capacity is expanded in Canada to handle an additional 5 million slaughter hogs.

Weaner/Feeder Market

Weaner producers remain the most vulnerable under this scenario as their access to the US market has been interrupted. For this to be a positive scenario, weaner producers or finishers will require a very large increase in finishing space to come into production in a short period of time.

In order to understand the scale of finishing space required, in 2001 Ontario and the prairies marketed about 13.7 million slaughter hogs. Using a factor of three, this translates into finishing space for 4.6 million head. The 3 million weaners exported in 2001 would require finishing space for 1 million head or an increase of 22%.

During the past five years, Ontario and prairie hog producers have increased their marketings by nearly 7% each year (slaughter plus total Canadian market hog exports). This implies that finishing space has either expanded or at least been available for increases of about 7% each year. As such, based on past performance, an increase in finishing space of 22% are a material increase but one that could be expected in normal periods after three years.

Pork Packing

Pork packers across Canada could be favorably impacted under this scenario if they react by adding slaughter capacity.

Currently, Canadian packers slaughter about 22 million head per year. If they were to run at full capacity all the time, using a 465,000 head per week capacity figure, annual slaughter could run as high as 24.2 million head. As such, running at full capacity could absorb about 2 million of the 5 million hogs that were exported in 2001. Capacity would need to be increased by about 3 million head per year or 58,000 head per week. Assuming a 465,000 head capacity, the increase amounts to 12%.

The question then becomes whether it is realistic to expect a capacity increase of 58,000 head per week. It is realistic if past performance is the measure. Since 1997, packing capacity has grown by 100,000 head per week.

7.3.3 Summary: Positive Scenario 2

A positive scenario developing from the fact that the US will not take Canadian market hogs can only occur if there is a material increase in Canadian finishing and slaughter capacity. Past performance in both finishing and packing in Ontario and the prairies indicates that this is entirely possible.

Past measures of course may be misleading given increased environmental barriers to expansion. Furthermore, the issue of labor availability is plaguing the Canadian packing industry at current production levels. Increasing capacity might be out of the question for this reason alone.

Another limiting factor is the time constraint. Mandatory COL is going to be a fact in less than two years. In order to take advantage of the US's decision to impose huge new costs on its industry, Canadian producers, packers and governments are going to have to make strategic decisions regarding expansion and marketing. These decisions must be made soon in order to avoid the disruptions that are possible in 2004.

8.0 Conclusions and Recommendations

The Canadian hog industry is a vibrant and growing sector of Canadian agriculture. It adds value to the grains sector and provides thousands of jobs and economic spin-offs. Today the Canadian hog industry is dependent upon the US market for well over one third of total production. That is, the US market receives over one third of Canadian hogs in either pork or live form. North America is one market for hogs and pork.

Within this context the US has introduced the Country of Origin Labeling provision of the Farm Bill. The purpose of the COL is to impede or eliminate the flow of covered products and the associated inputs used to produce them (ie., live hogs and cattle).

Based on analysis of the COL it is concluded that it is a major threat to the Canadian hog and pork industry. Also based on the research conducted for this project and the current, limited knowledge base regarding COL costs, there are a large number of possible outcomes that might evolve over the next two years. They can be categorized as negative, neutral (business as usual) or positive. Given the fact that the US industry has not yet conducted analysis and research regarding the impact of COL, at this point in time, it must be admitted that either of the positive, negative or neutral scenarios is possible. Positive or neutral scenarios can only occur if one or both of the following occur:

1. US industry is able to overcome the higher costs of Canadian hogs
2. The Canadian industry is able to significantly increase its packing and finishing capacity.

If the above two situations do not occur then the industry will be facing a negative scenario. The number of permutations and combinations for what could happen in both negative and positive scenarios are almost innumerable. Nevertheless, the industry is facing a situation where the market for over one–third its hog production could be lost. Depending on how any negative scenario evolves; farm income lost could range between $350 million and $750 million. The number of farms lost could range from 450 to 3,000.

8.1 Recommendations

Manitoba Pork must pursue a two-pronged strategic approach to COL. The first strategy is to work with US national organizations in the pork and cattle industries to try and ensure that mandatory COL does not come to pass in its current form. The second strategy is to prepare for the potential that mandatory COL will in fact become a reality in 2004.

Strategy One: Work to Defeat Mandatory COL.

We believe that the best way to ensure that COL never becomes mandatory is to convince US Congressional representatives that it is bad for the US industry. Therefore, we recommend that:

a. Manitoba Pork partner with US opponents of COL including FMI and AMI to help provide information that will persuade law makers to abolish this law.
b. In that regard, focus should be placed on the economic costs to the US industry of the "positive scenarios" above. What is positive to Canada is not positive to the US industry. To date the estimates of cost for COL in the US have focused on the

compliance costs. What needs to be done is to confirm the compliance costs now that the actual regulations have been published, but also to estimate the cost to finishers in the US who won't be able to fill their barns and to packers whose plants will not be at capacity. Both the compliance costs and the costs of lost production will be huge for the US, but the US industry remains only vaguely aware of the potential problems that they will face.

c. Examine every possible way to bring legal action under WTO or NAFTA against COL, especially **before** it becomes mandatory. If we wait until it is mandatory, the harm will be done before we can get relief.

Strategy Two: Capacity Expansion

From a Canadian perspective four things need to be done to maximize the probability of having the best possible outcome:

- Finishing capacity in Canada needs to expand.

- Packing plants need to access and train the labour required to move to two shifts.

- Canadian Brands need to be promoted on shelves in the US or Asian countries, to replace US product in either the domestic or export market, and preferably at premium prices.

This includes determining whether there is a product basis for any claims that can be made for Canadian product: in other words, if the US is going to give Canada the opportunity to label, let's figure out how to take maximum advantage of it.

- Development of pricing mechanisms for hogs are needed in Canada that do not rely on US cash or futures hog prices.

In every situation in the past when hogs could not be arbitraged into the US market, their prices declined in Canada. Producers and lenders are aware of this. On the other hand, COL obviously brings new risks to all market participants. Hence it follows that it may be time to search for ways that prices can be established so that risks and rewards are shared equitably between packers, producers and even retailers. The George Morris Centre is about to release a report on alternative pricing mechanisms that may be helpful here.

It would appear to make sense that a consortium of industry and government be put together to make a program like the one discussed above work. It is possible that the effort to make COL go away in the US can dovetail with the effort to optimize Canada's opportunities under COL. For example, a consortium of government and industry might put together a "war chest" that would provide for loan guarantees for finishing spaces, underwrite recruiting and training costs for plant labour, and contribute to a fund to obtain shelf space for Canadian product. This agreement might be leaked informally to US lawmakers, along with information about how much COL will cost US farmers and packers with the implication that they would go away if COL did.

The Centre is prepared to assist in any way in a coalition within Canada or within Canada and with US interests to develop the appropriate strategy.

Appendix A

Interview Questions

Interview US Grocery Retailers

Based on your understanding of the pending COL regulations, what impact will these regulations have on your business with regard to the following:

1. on your marketing, merchandising and operating costs? (percentage changes)
2. are you going to request that your suppliers label the product as to COL or will you label the product?
3. on your procurement decisions?
4. on your willingness to purchase Canadian pork (volumes)?
5. on your offer price or price you would be willing to pay for Canadian pork?
6. on your merchandising or marketing methods for Canadian pork?
7. operating costs associated with handling Canadian pork?
8. What is your overall assessment of longer-term implications and competitive reactions to COL?

Interview US Pork Packers

Interview a broad-cross section of US pork packers, primarily concentrating on those that are regular purchasers of Canadian slaughter hogs. Questions will address the following areas:

1. What do you see as the primary operating and cost impact of COL to your business regarding the purchase of Canadian hogs?
2. Can you itemize the major costs of implementing COL regulations pertaining to Canadian slaughter hogs.
3. Do you currently segregate hogs and pork for any reason?
4. Is the cost of segregation of hogs and pork significant or prohibitive?
5. What will the Impact of COL be on the volume of Canadian slaughter hogs purchased?
6. What do you see will be the impact of COL on prices on Canadian live hogs (contract and spot procurement). Can you try and quantify the price impact?
7. With regard to marketing pork products, what will be the likely impact of marketing pork products from Canadian hogs (price and volume)?
8. What are the major impediments to marketing a made in Canada pork product?
9. Do you see any advantages of marketing Canadian pork?
10. What is your overall assessment of longer term implications and competitive reaction?

Interview US Hog Finishers

Interview a broad-cross section of US hog finishers; concentrating on those that are regular purchasers of Canadian weaner pigs. Questions will address the following areas:

1. What will be the impact of COL on volume of Canadian weaner pigs purchased
2. What will be the impact of COL on prices bid for Canadian weaner pigs (contract and spot procurement).
3. What do you see are the costs of implementing COL regulations pertaining to Canadian weaner pigs (operational changes required)

4. What will be the impact of marketing finished slaughter hogs that were Canadian weaner pigs (price and volume).
5. What is your overall assessment of longer term implications and competitive reaction

Interview Canadian Pork Packers

Interview a broad-cross section of Canadian pork packers. Questions will address the following areas:

1. What is going to be the impact of COL on volume of Canadian slaughter hogs exported to the United States?
2. What is going to be the impact of COL on the volume of Canadian weaner pigs exported to the United States?
3. Will you be able to expand processing capacity in order to meet expected volumes in light of COL?
4. What is going to be the impact of COL on prices of live hogs (contract and spot procurement). (Quantify and explain why)?
5. What will be the major operating changes and costs of implementing COL regulations pertaining to Canadian pork exports to the US.
6. What will be the likely impact of marketing Canadian pork products (price and volume) into the US.
7. Will COL result in export opportunities in other countries? Will you be forced to expand non-US exports?
8. Is there a realistic likelihood of enhanced "branding" opportunities for Canadian pork in the United States?
9. What is your overall assessment of longer-term implications and competitive reaction?

Interview Canadian Hog Finishers

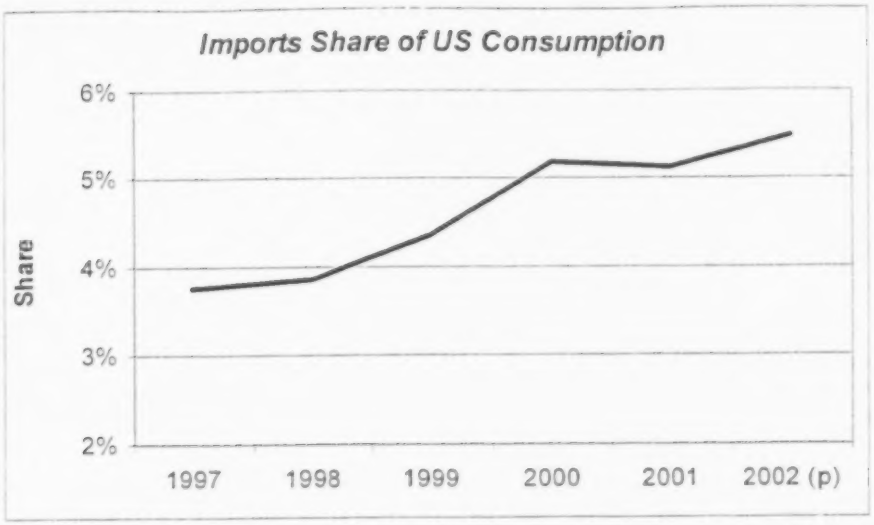
Interview a broad-cross section of Canadian hog finishers and farrow-to-finish operators; concentrating on those that are regular purchasers of Canadian weaner pigs. Questions will address the following areas:

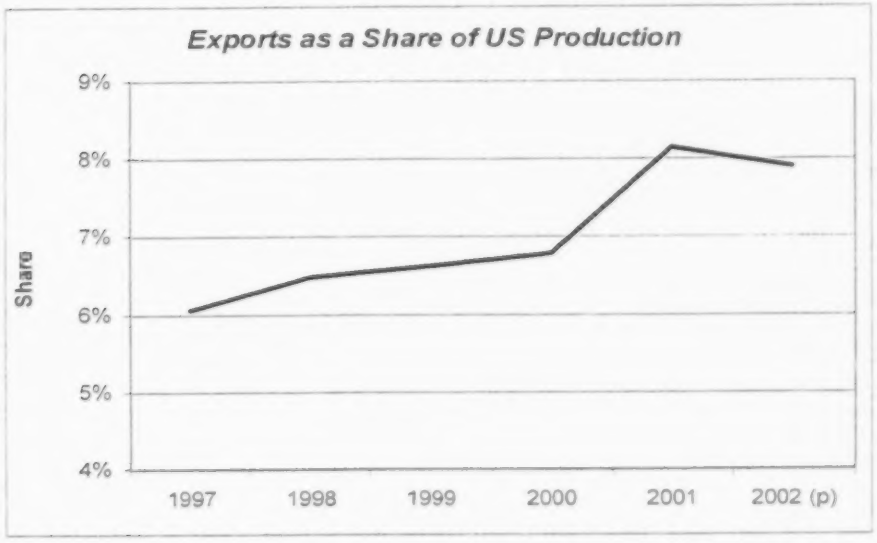
1. What will be the impact of COL on volume of Canadian weaner pigs purchased
2. What is your ability to expand operations to accommodate increased volumes
3. What will be the impact of COL on prices bid for Canadian weaner pigs (contract and spot procurement) and on live prices received from Canadian and US packers.
4. What is your overall assessment of longer-term implications and competitive reaction.

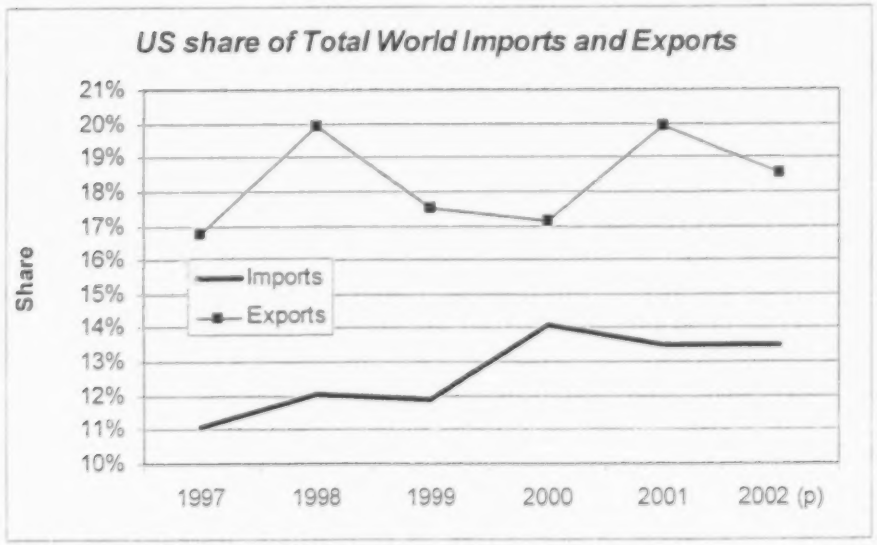
Appendix B

Pork Summary Selected Countries 1,000 Metric Tons (Carcass Weight Equivalent)							
	1997	1998	1999	2000	2001	2002 (p)	2003 (f)
Production							
China	35,963	38,837	40,056	40,314	41,845	43,000	44,100
European Union	16,051	17,392	18,059	17,585	17,419	17,800	17,820
Brazil	1,540	1,690	1,835	2,010	2,230	2,356	2,430
Canada	1,257	1,337	1,550	1,638	1,729	1,830	1,865
Poland	1,540	1,510	1,490	1,500	1,560	1,600	1,700
Russian Federation	1,570	1,650	1,675	1,620	1,547	1,585	1,640
Japan	1,283	992	950	1,004	1,077	1,161	1,200
Philippines	901	1,285	1,277	1,269	1,245	1,200	1,190
Korea, Republic of	873	933	973	1,008	1,064	1,095	1,120
Mexico	940	950	994	1,035	1,065	1,085	1,100
Others	4,399	4,129	4,128	3,806	3,683	3,780	3,790
Total Non-US	**66,317**	70,705	72,987	72,789	74,464	76,492	77,955
United States	**7,835**	8,623	8,758	8,597	8,691	8,973	8,819
World Total	**74,152**	79,328	81,745	81,386	83,155	85,465	86,774
Imports							
Japan	786	777	919	995	1,068	1,125	1,150
Russian Federation	886	710	832	520	560	700	710
Mexico	82	144	190	276	294	300	310
Hong Kong	171	207	217	247	260	285	300
Korea, Republic of	77	66	156	174	123	145	150
Canada	59	64	65	68	91	100	105
China	14	46	43	50	58	60	70
European Union	62	40	54	54	55	60	60
Australia	12	53	27	29	46	55	55
Romania	5	74	55	47	23	50	50
Others	157	160	227	223	188	194	202
Total Non-US	**2,311**	2,341	2,785	2,683	2,766	3,074	3,162
United States	**287**	320	375	439	431	479	490
World Total	**2,598**	2,661	3,160	3,122	3,197	3,553	3,652
Exports							
European Union	974	1,004	1,390	1,470	1,235	1,300	1,325
Canada	420	432	554	658	727	800	815
Brazil	82	105	109	163	337	400	430
China	158	143	75	73	139	225	200
Hungary	136	109	131	143	118	120	110
Poland	284	220	235	160	100	80	85
Australia	12	17	37	49	66	79	83
Korea, Republic of	67	49	53	59	61	60	60
Mexico	39	116	113	30	42	20	55
Ukraine	30	27	10	8	14	27	25
Others	155	20	23	14	5	5	7
Total Non-US	**2,357**	2,242	2,730	2,827	2,844	3,116	3,195
United States	**474**	558	580	584	708	709	726
World Total	**2,831**	2,800	3,310	3,411	3,552	3,825	3,921
Consumption							
China	35,819	38,740	40,024	40,291	41,764	42,835	43,970
European Union	15,020	15,843	16,301	16,169	16,239	16,560	16,555
Japan	2,134	2,219	2,321	2,019	2,119	2,299	2,409
Russian Federation	2,455	2,146	2,212	2,228	2,269	2,335	2,368
Brazil	1,468	1,581	1,727	1,826	1,919	1,956	2,000
Poland	1,334	1,462	1,484	1,544	1,476	1,550	1,607
Mexico	983	1,045	1,131	1,252	1,298	1,325	1,350
Korea, Republic of	870	940	984	1,059	1,158	1,286	1,325

Source: USD FAS







Source USDA FATUS

Appendix C

Estimated Daily Slaughter Capacity

			February 1995		February 2000		Spring 2002	
	Company	Plant	Plant	Co. Total	Plant	Co. Total	Plant	Co. Total
1	Smithfield	Tar Heel , NC	16,500		32,000		32,000	
		Smithfield, VA	9,500		9,500		9,500	
		Gwaltney, VA	8,800	34,800	8,800		8,800	
	Morrell	Sioux Falls, SD	15,000		15,000		15,000	
		Sioux City, IA	15,000	30,000	15,000	80,300	15,000	80,300
2	IBP	Waterloo,IA	17,000		18,000		19,000	
		Logansport, IN			13,400		14,000	
		Storm Lake, IA	13,400		13,400		14,000	
		Col. Junction, IA	13,000		10,500		9,800	
		Madison, NE	7,500		7,500		7,500	
		Council Bluffs, IA	7,300		Closed		Closed	
		Perry, IA	6,000	64,200	6,700	69,500	6,700	71,000
3	Swift	Worthington, MN	15,700		15,700		17,000	
		Marshalltown, IA	15,700		15,700		17,500	
		Louisville, KY	8,000	39,400	8,000	39,400	8,500	43,000
4	Excel	Beardstown, IL	16,000		16,000		16,000	
		Ottumwa, IA	10,000	26,000	14,500		16,000	
	Tyson Foods	Marshall, MO	11,800	11,800	8,200	38,700	Closed	32,000
5	Hormel	Austin, MN	13,000		16,000		17,000	
		Fremont, NE	10,000		8,500		9,000	
		Rochelle, IL	7,000	30,000	7,100	31,600	4,500	30,500
6	Farmland	Crete, NE	8,300		8,300		10,000	
		Denison, IA	7,500		7,500		7,500	
		Monmouth, IL	7,000	22,800	7,000		8,000	
	FDL Foods	Dubuque, IA	11,000	11,000	11,000	33,800	Closed	25,500
	Thorn Apple	Detroit, MI	12,000		Closed		Closed	
	Valley	Hyrum, UT	1,500	13,500	Closed	Closed	Closed	Closed
7	Seaboard	Guymon, OK			16,000	16,000	16,000	16,000
8	Prem. Std.	Milan, MO	5,000	5,000	7,000	7,000	7,100	
		Clinton, NC	8,000	8,000	8,000	8,000	10,000	17,100
9	Indiana Pack	Delphi, IN	9,000	9,000	11,000	11,000	12,000	12,000
	Dakota Pork	Huron, SD	5,850	5,850	Closed	Closed	Closed	Closed
10	Pinnacle Foods	Des Moines, IA	5,500	5,500	6,000		6,000	
		Chicago (Ampac)	2,000	2,000	2,000	8,000	Closed	
		Falcon, NC					600	6,600
11	Sara Lee	West Point, MS	6,500		6,500		6,500	
		Newburn, TN	800	7,300	2,500	9,000	2,500	9,000
12	Hatfield	Hatfield, PA	6,800	6,800	7,000	7,000	7,800	7,800
13	Clougherty	Vernon, CA	6,000	6,000	6,000	6,000	6,800	6,800

Estimated Daily Slaughter Capacity (Cont.)

			February 1995		February 2000		Spring 2002	
	Company	Plant	Plant	Co. Total	Plant	Co. Total	Plant	Co. Total
	Worth'ton Pack	Worthington, IN	4,700	4,700	Closed	Closed	Closed	Closed
	Premium Pork	Moultrie, GA	4,700	4,700	Closed	Closed	Closed	Closed
15	J.H. Routh	Sandusky, OH	3,700	3,700	3,700	3,700	4,200	4,200
	Fisher	Louisville, KY	3,000	3,000	Closed	Closed	Closed	Closed
16	Greenwood	Greenwood, SC	3,000	3,000	3,000	3,000	3,000	3,000
17	Sioux-Preme	Sioux Center, IA	2,650	2,650	2,650	2,650	2,900	2,900
	Southside Pork	Hazelton, PA			Closed		Closed	
		Shamokin, PA			Closed	Closed	Closed	Closed
18	Johnsonville**	Watertown, WI			1,000		550	
		Momence, IL			1,500	2,500	1,250	1,800
19	Pork Packers Int'l	Downs, KS	1,600	1,600	1,600	1,600	1,700	1,700
20	Bob Evans Farms	Bidwell, OH					150	
		Xenia, OH					300	
		Hillsdale, MI					500	
		Galva, Il			1,500	1,500	500	1,450
	Field Packing	Owensboro, KY	1,200	1,200	Closed	Closed	Closed	Closed
21	Yosemite Meat	Modesto, CA	1,200	1,200	1,200	1,200	1,200	1,200
22	Cloverdale Foods	Minot, ND	920	920	920	920	920	920
	Ohio Packing Co.	Columbus, OH	900	900	Closed	Closed	Closed	Closed
23	Leidy's	Souderton, PA	800	800	800	800	800	800
24	Owens Sausage	Richardson, TX			800	800	800	800
25	Odom's	Little Rock, AR			750	750	750	750
26	Abbeyland Foods	Curtiss, WI			700	700	700	700
27	Independent Mea	Twin Falls, ID	400	400	650	650	650	650
28	Brown Packing	Little Rock, AR	600	600	600	600	600	600
29	Fineberg Packing	Memphis, TN	500	500	500	500	500	500
	Reeves Packing	Ada, OK	400	400	Closed	Closed	Closed	Closed
30	Lowell Packing	Fitzgerald, GA			350	350	350	350
31	Masami Meat Co.	Klammath Falls, OR	300	300	300	300	300	300
32	Simeus Food	Forest City, NC			300	300	300	300
33	Carleton Packing	Carleton, OR			250	250	250	250
34	Metzger Foods	Paducah, KY	250	250	250	250	250	250
	TOTAL CAPACITY			**369,770**		**388,620**		**381,020**

Appendix D

(November, 2001)

ESTIMATED CANADIAN SLAUGHTERING CAPACITY, CURRENT & PLANNED (WESTERN CANADA)

Province/Plant		Company Name	1996 WEEKLY	1996 ANNUAL	2002/2003 WEEKLY	2002/2003 ANNUAL
BC						
	Langley	Britco Export Packers	4,000	208,000	6,000	312,000
		BC TOTAL	4,000	208,000	6,000	312,000
Alberta						
	Red Deer	Olymel (formerly Fletchers)	25,000	1,300,000	40,000	2,080,000
	Edmonton	Maple Leaf (Closed 1997)	20,000	1,040,000	0	0
	Lethbridge	Maple Leaf	0	0	6,500	338,000
	Trochu	Trochu Meats	3,000	156,000	3,000	156,000
	Warburg	J&M Meats International	3,000	156,000	3,000	156,000
		ALBERTA TOTAL	51,000	2,652,000	52,500	2,730,000
Saskatchewan						0
	Saskatoon	Mitchell's	20,000	1,040,000	20,000	1,040,000
	Moose Jaw	Worldwide Pork	5,000	260,000	5,000	260,000
		SASKATCHEWAN TOTAL	25,000	1,300,000	25,000	1,300,000
Manitoba						
	Winnipeg	Maple Leaf (formerly Burns)	14,000	728,000	0	0
	Winnipeg	Maple Leaf (formerly Schneider)	17,500	910,000	17,500	910,000
	Neepawa	Springhill Farms	12,500	650,000	20,000	1,040,000
	Winnipeg	Best Brand (formerly Forgan)	4,000	208,000	8,000	416,000
	Brandon	Maple Leaf			45,000	2,340,000
		MANITOBA TOTAL	48,000	2,496,000	90,500	4,706,000
		WESTERN CANADA TOTAL	128,000	6,656,000	174,000	9,048,000

ovember, 2001)

ESTIMATED CANADIAN SLAUGHTERING CAPACITY, CURRENT & PLANNED (EASTERN CANADA)

rovince/Plant		Company Name	1996 WEEKLY	1996 ANNUAL	2002/2003 WEEKLY	2002/2003 ANNUAL
ntario						
	Burlington	Maple Leaf	32,000	1,664,000	45,000	2,340,000
	Toronto	Quality Meat Packers	25,000	1,300,000	30,000	1,560,000
	Breslau	Conestoga	2,000	104,000	12,500	650,000
	Mitchell	West Perth	0	0	5,000	260,000
	Other provincial				5,900	306,800
		ONTARIO TOTAL	59,000	3,068,000	98,400	5,116,800
uebec						
	Vallée-Jonction	Olymel	27,000	1,404,000	33,000	1,716,000
	St-Valerien	Olymel	21,000	1,092,000	28,000	1,456,000
	Princelville	Olymel	13,000	676,000	12,000	624,000
	St-Henri	Brochu	20,000	1,040,000	22,000	1,144,000
	Notre-Dame-du-Lac	Du Breton	11,000	572,000	15,000	780,000
	Yamachiche	Trahan	6,000	312,000	7,000	364,000
	Yamachiche	Lucyporc	0	0	3,250	169,000
	St. Alexandre	Abattoir St-Alexandre	5,500	286,000	14,000	728,000
	St-Esprit	Brochu	5,000	260,000	15,000	780,000
	St-Blaise	Agromex	5,000	260,000	7,000	364,000
	St-Jacques-de-Montcalm	Jolibec	3,500	182,000	0	0
		QUEBEC TOTAL	117,000	6,084,000	156,250	8,125,000
tantic						
	Charlottetown	Maple Leaf	5,000	260,000	5,000	260,000
	Moncton	Maple Leaf	5,000	260,000	6,000	312,000
	Berwick	Larsen	5,000	260,000	8,000	416,000
	Antigonish	Antigonish Abattoir	300	15,600	300	15,600
		ATLANTIC TOTAL	15,300	795,600	19,300	1,003,600
		EASTERN CANADA TOTAL	191,300	9,947,600	273,950	14,245,400
TAL CANADIAN CAPACITY			319,300	16,603,600	447,950	23,293,400